APPENDIX E

DATA VALIDATION PACKAGES

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: Top Soil
Lab Sample ID: 490-137586-1
Lab Name: TestAmerica Nashville
Job No.: 490-137586-1
SDG ID.:
Matrix: Solid
Date Sampled: 09/27/2017 16:30
Reporting Basis: DRY
Date Received: 09/28/2017 09:25
% Solids: 81.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	12100	5.81	2.33	mg/Kg			1	6020A
7440-36-0	Antimony	0.233	0.581	0.233	mg/Kg	U		1	6020A
7440-38-2	Arsenic	2.57	0.581	0.233	mg/Kg			1	6020A
7440-39-3	Barium	79.7	0.581	0.233	mg/Kg			1	6020A
7440-41-7	Beryllium	0.451	0.581	0.233	mg/Kg			1	6020A
7440-43-9	Cadmium	0.233	0.581	0.233	mg/Kg	U		1	6020A
7440-70-2	Calcium	1890	58.1	29.1	mg/Kg			1	6020A
7440-47-3	Chromium	16.8	0.581	0.233	mg/Kg			1	6020A
7440-48-4	Cobalt	4.45	0.581	0.233	mg/Kg			1	6020A
7440-50-8	Copper	4.35	0.581	0.233	mg/Kg			1	6020A
7439-89-6	Iron	8860	5.81	2.33	mg/Kg			1	6020A
7439-92-1	Lead	7.44	0.581	0.233	mg/Kg			1	6020A
7439-95-4	Magnesium	1330	58.1	29.1	mg/Kg			1	6020A
7439-96-5	Manganese	242	0.581	0.233	mg/Kg			1	6020A
7440-02-0	Nickel	8.87	0.581	0.233	mg/Kg			1	6020A
7440-09-7	Potassium	1930	58.1	29.1	mg/Kg			1	6020A
7782-49-2	Selenium	0.233	0.581	0.233	mg/Kg	U		1	6020A
7440-22-4	Silver	0.116	0.581	0.116	mg/Kg	U		1	6020A
7440-23-5	Sodium	155	58.1	29.1	mg/Kg			1	6020A
7440-28-0	Thallium	0.233	0.581	0.233	mg/Kg	U		1	6020A
7440-62-2	Vanadium	19.8	0.581	0.233	mg/Kg			1	6020A
7440-66-6	Zinc	26.4	5.81	2.33	mg/Kg			1	6020A
7439-97-6	Mercury	0.0380	0.121	0.0363	mg/Kg			1	7471B

10/5/17

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: Backfill
Lab Sample ID: 490-137586-2
Lab Name: TestAmerica Nashville
Job No.: 490-137586-1
SDG ID.:
Matrix: Solid
Date Sampled: 09/27/2017 16:35
Reporting Basis: DRY
Date Received: 09/28/2017 09:25
% Solids: 88.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	11300	5.61	2.25	mg/Kg		B	1	6020A
7440-36-0	Antimony	0.225	0.561	0.225	mg/Kg	U		1	6020A
7440-38-2	Arsenic	3.47	0.561	0.225	mg/Kg			1	6020A
7440-39-3	Barium	66.7	0.561	0.225	mg/Kg			1	6020A
7440-41-7	Beryllium	0.404	0.561	0.225	mg/Kg	J	JQ	1	6020A
7440-43-9	Cadmium	0.225	0.561	0.225	mg/Kg	U		1	6020A
7440-70-2	Calcium	1300	56.1	28.1	mg/Kg			1	6020A
7440-47-3	Chromium	14.0	0.561	0.225	mg/Kg			1	6020A
7440-48-4	Cobalt	3.30	0.561	0.225	mg/Kg			1	6020A
7440-50-8	Copper	3.17	0.561	0.225	mg/Kg			1	6020A
7439-89-6	Iron	7230	5.61	2.25	mg/Kg			1	6020A
7439-92-1	Lead	6.64	0.561	0.225	mg/Kg			1	6020A
7439-95-4	Magnesium	1140	56.1	28.1	mg/Kg			1	6020A
7439-96-5	Manganese	170	0.561	0.225	mg/Kg			1	6020A
7440-02-0	Nickel	6.66	0.561	0.225	mg/Kg			1	6020A
7440-09-7	Potassium	1860	56.1	28.1	mg/Kg			1	6020A
7782-49-2	Selenium	0.225	0.561	0.225	mg/Kg	U		1	6020A
7440-22-4	Silver	0.112	0.561	0.112	mg/Kg	U		1	6020A
7440-23-5	Sodium	99.4	56.1	28.1	mg/Kg			1	6020A
7440-28-0	Thallium	0.225	0.561	0.225	mg/Kg	U		1	6020A
7440-62-2	Vanadium	17.7	0.561	0.225	mg/Kg			1	6020A
7440-66-6	Zinc	25.6	5.61	2.25	mg/Kg			1	6020A
7439-97-6	Mercury	0.149	0.113	0.0339	mg/Kg			1	7471B

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Nashville | Job No.: 490-137586-1

SDG No.:

Client Sample ID: Top Soil | Lab Sample ID: 490-137586-1

Matrix: Solid | Lab File ID: 092817-024.D

Analysis Method: 8270D SIM | Date Collected: 09/27/2017 16:30

Extract. Method: 3550C | Date Extracted: 09/28/2017 11:27

Sample wt/vol: 30.55(g) | Date Analyzed: 09/28/2017 21:04

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 1

Injection Volume: 3(uL) | Level: (low/med) Low

% Moisture: 18.1 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 463781 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
83-32-9	Acenaphthene	0.00264	U	0.00396	0.00264
208-96-8	Acenaphthylene	0.00216	U	0.00396	0.00216
120-12-7	Anthracene	0.00156	U	0.00396	0.00156
56-55-3	Benzo[a]anthracene	0.00156	J JQ	0.00396	0.00144
50-32-8	Benzo[a]pyrene	0.00230	J JQ	0.00396	0.00156
205-99-2	Benzo[b]fluoranthene	0.00400		0.00396	0.00264
191-24-2	Benzo[g,h,i]perylene	0.00168	U	0.00396	0.00168
207-08-9	Benzo[k]fluoranthene	0.00216	U	0.00396	0.00216
218-01-9	Chrysene	0.00369	J JQ	0.00396	0.00144
53-70-3	Dibenz(a,h)anthracene	0.00180	U	0.00396	0.00180
206-44-0	Fluoranthene	0.00288	J JQ	0.00396	0.00168
86-73-7	Fluorene	0.00420	U	0.00600	0.00420
193-39-5	Indeno[1,2,3-cd]pyrene	0.00192	U	0.00396	0.00192
91-20-3	Naphthalene	0.00264	U	0.00396	0.00264
85-01-8	Phenanthrene	0.00204	U	0.00396	0.00204
129-00-0	Pyrene	0.00372	J JQ	0.00396	0.00180
91-57-6	2-Methylnaphthalene	0.00252	U	0.00396	0.00252
90-12-0	1-Methylnaphthalene	0.00216	U	0.00396	0.00216

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	64		29-120
4165-60-0	Nitrobenzene-d5	54		27-120
1718-51-0	Terphenyl-d14	60		13-120

DS 10/5/17

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Nashville | Job No.: 490-137586-1

SDG No.:

Client Sample ID: Backfill | Lab Sample ID: 490-137586-2

Matrix: Solid | Lab File ID: 092817-025.D

Analysis Method: 8270D SIM | Date Collected: 09/27/2017 16:35

Extract. Method: 3550C | Date Extracted: 09/28/2017 11:27

Sample wt/vol: 30.83(g) | Date Analyzed: 09/28/2017 21:25

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 1

Injection Volume: 3(uL) | Level: (low/med) Low

% Moisture: 12.0 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 463781 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
83-32-9	Acenaphthene	0.00243	U	0.00365	0.00243
208-96-8	Acenaphthylene	0.00199	U	0.00365	0.00199
120-12-7	Anthracene	0.00144	U	0.00365	0.00144
56-55-3	Benzo[a]anthracene	0.00327	J JQ	0.00365	0.00133
50-32-8	Benzo[a]pyrene	0.00397		0.00365	0.00144
205-99-2	Benzo[b]fluoranthene	0.00689		0.00365	0.00243
191-24-2	Benzo[g,h,i]perylene	0.00218	J JQ	0.00365	0.00155
207-08-9	Benzo[k]fluoranthene	0.00267	J JQ	0.00365	0.00199
218-01-9	Chrysene	0.00555		0.00365	0.00133
53-70-3	Dibenz(a,h)anthracene	0.00166	U	0.00365	0.00166
206-44-0	Fluoranthene	0.00692		0.00365	0.00155
86-73-7	Fluorene	0.00387	U	0.00553	0.00387
193-39-5	Indeno[1,2,3-cd]pyrene	0.00177	U	0.00365	0.00177
91-20-3	Naphthalene	0.00243	U	0.00365	0.00243
85-01-8	Phenanthrene	0.00273	J JQ	0.00365	0.00188
129-00-0	Pyrene	0.00833		0.00365	0.00166
91-57-6	2-Methylnaphthalene	0.00232	U	0.00365	0.00232
90-12-0	1-Methylnaphthalene	0.00199	U	0.00365	0.00199

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	71		29-120
4165-60-0	Nitrobenzene-d5	94		27-120
1718-51-0	Terphenyl-d14	61		13-120

10/5/17

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Nashville | Job No.: 490-137671-1

SDG No.:

Client Sample ID: WOR006-48-170928-56 | Lab Sample ID: 490-137671-1

Matrix: Solid | Lab File ID: 092917-020.D

Analysis Method: 8270D SIM | Date Collected: 09/28/2017 16:30

Extract. Method: 3550C | Date Extracted: 09/29/2017 17:32

Sample wt/vol: 30.03(g) | Date Analyzed: 09/29/2017 23:34

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 5

Injection Volume: 3(uL) | Level: (low/med) Low

% Moisture: 15.9 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 464267 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
83-32-9	Acenaphthene	0.0271	JH	0.0196	0.0131
208-96-8	Acenaphthylene	0.0129	JQH	0.0196	0.0107
120-12-7	Anthracene	0.00772	U	0.0196	0.00772
56-55-3	Benzo[a]anthracene	0.00713	U	0.0196	0.00713
50-32-8	Benzo[a]pyrene	0.00772	U	0.0196	0.00772
205-99-2	Benzo[b]fluoranthene	0.0131	U	0.0196	0.0131
191-24-2	Benzo[g,h,i]perylene	0.00831	U	0.0196	0.00831
207-08-9	Benzo[k]fluoranthene	0.0107	U	0.0196	0.0107
218-01-9	Chrysene	0.00713	U	0.0196	0.00713
53-70-3	Dibenz(a,h)anthracene	0.00891	U	0.0196	0.00891
206-44-0	Fluoranthene	0.00986	JQH	0.0196	0.00831
86-73-7	Fluorene	0.0208	U	0.0297	0.0208
193-39-5	Indeno[1,2,3-cd]pyrene	0.00950	U	0.0196	0.00950
91-20-3	Naphthalene	0.0205	JH	0.0196	0.0131
85-01-8	Phenanthrene	0.0569	JH	0.0196	0.0101
129-00-0	Pyrene	0.0178	JQH	0.0196	0.00891
91-57-6	2-Methylnaphthalene	0.126	~~F1~~ JK	0.0196	0.0125
90-12-0	1-Methylnaphthalene	0.119	~~F1~~ JK	0.0196	0.0107

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	121	X	29-120
4165-60-0	Nitrobenzene-d5	129	X	27-120
1718-51-0	Terphenyl-d14	92		13-120

10/10/17

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Nashville | Job No.: 490-137762-1

SDG No.:

Client Sample ID: WOR006-010-48-170929-56 | Lab Sample ID: 490-137762-1

Matrix: Solid | Lab File ID: 100317-004.D

Analysis Method: 8270D SIM | Date Collected: 09/29/2017 16:35

Extract. Method: 3550C | Date Extracted: 09/30/2017 16:38

Sample wt/vol: 30.31(g) | Date Analyzed: 10/03/2017 09:39

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 5

Injection Volume: 3(uL) | Level: (low/med) Low

% Moisture: 13.8 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 464885 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
83-32-9	Acenaphthene	0.0453	~~F1~~ JH	0.0189	0.0126
208-96-8	Acenaphthylene	0.0272		0.0189	0.0103
120-12-7	Anthracene	0.00746	U	0.0189	0.00746
56-55-3	Benzo[a]anthracene	0.00689	U	0.0189	0.00689
50-32-8	Benzo[a]pyrene	0.00877	~~J~~ JP	0.0189	0.00746
205-99-2	Benzo[b]fluoranthene	0.0129	~~J~~ JP	0.0189	0.0126
191-24-2	Benzo[g,h,i]perylene	0.00803	U	0.0189	0.00803
207-08-9	Benzo[k]fluoranthene	0.0103	U	0.0189	0.0103
218-01-9	Chrysene	0.0444		0.0189	0.00689
53-70-3	Dibenz(a,h)anthracene	0.00861	U	0.0189	0.00861
206-44-0	Fluoranthene	0.0141	~~J~~ JP	0.0189	0.00803
86-73-7	Fluorene	0.0201	U ~~F1~~	0.0287	0.0201
193-39-5	Indeno[1,2,3-cd]pyrene	0.00918	U ~~F1~~	0.0189	0.00918
91-20-3	Naphthalene	0.0126	U ~~F1~~ ~~F2~~	0.0189	0.0126
85-01-8	Phenanthrene	0.178	~~F1~~ JH	0.0189	0.00976
129-00-0	Pyrene	0.0422		0.0189	0.00861
91-57-6	2-Methylnaphthalene	0.621	JL	0.0189	0.0121
90-12-0	1-Methylnaphthalene	0.431	JL	0.0189	0.0103

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	65		29-120
4165-60-0	Nitrobenzene-d5	260	X	27-120
1718-51-0	Terphenyl-d14	70		13-120

10/7/17

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Nashville | Job No.: 490-137762-1

SDG No.:

Client Sample ID: WOR006-010-48-170929-57 | Lab Sample ID: 490-137762-2

Matrix: Solid | Lab File ID: 100317-007.D

Analysis Method: 8270D SIM | Date Collected: 09/29/2017 16:40

Extract. Method: 3550C | Date Extracted: 09/30/2017 16:38

Sample wt/vol: 30.47(g) | Date Analyzed: 10/03/2017 10:39

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 5

Injection Volume: 3(uL) | Level: (low/med) Low

% Moisture: 14.2 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 464885 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
83-32-9	Acenaphthene	0.159		0.0189	0.0126
208-96-8	Acenaphthylene	0.0571		0.0189	0.0103
120-12-7	Anthracene	0.00746	U	0.0189	0.00746
56-55-3	Benzo[a]anthracene	0.00688	U	0.0189	0.00688
50-32-8	Benzo[a]pyrene	0.0117	~~J~~ JQH	0.0189	0.00746
205-99-2	Benzo[b]fluoranthene	0.0189	~~J~~ JH	0.0189	0.0126
191-24-2	Benzo[g,h,i]perylene	0.0114	~~J~~ JQH	0.0189	0.00803
207-08-9	Benzo[k]fluoranthene	0.0103	~~U~~ UJ	0.0189	0.0103
218-01-9	Chrysene	0.00688	U	0.0189	0.00688
53-70-3	Dibenz(a,h)anthracene	0.00860	~~U~~ UJ	0.0189	0.00860
206-44-0	Fluoranthene	0.0309		0.0189	0.00803
86-73-7	Fluorene	0.0201	U	0.0287	0.0201
193-39-5	Indeno[1,2,3-cd]pyrene	0.00980	~~J~~ JQH	0.0189	0.00918
91-20-3	Naphthalene	0.0126	U	0.0189	0.0126
85-01-8	Phenanthrene	0.449		0.0189	0.00975
129-00-0	Pyrene	0.0650		0.0189	0.00860
91-57-6	2-Methylnaphthalene	1.63		0.0189	0.0120
90-12-0	1-Methylnaphthalene	1.27		0.0189	0.0103

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	104		29-120
4165-60-0	Nitrobenzene-d5	607	X	27-120
1718-51-0	Terphenyl-d14	103		13-120

10/9/17

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: West-01 | Lab Sample ID: 490-137889-3

Lab Name: TestAmerica Nashville | Job No.: 490-137889-1

SDG ID.:

Matrix: Solid | Date Sampled: 10/02/2017 14:10

Reporting Basis: DRY | Date Received: 10/03/2017 10:05

% Solids: 98.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	1810	4.76	1.91	mg/Kg			1	6020A
7440-36-0	Antimony	0.241	0.476	0.191	mg/Kg		JRP VB	1	6020A
7440-38-2	Arsenic	1.63	0.476	0.191	mg/Kg			1	6020A
7440-39-3	Barium	20.7	0.476	0.191	mg/Kg			1	6020A
7440-41-7	Beryllium	0.191	0.476	0.191	mg/Kg	U		1	6020A
7440-43-9	Cadmium	0.191	0.476	0.191	mg/Kg	U		1	6020A
7440-70-2	Calcium	228	47.6	23.8	mg/Kg			1	6020A
7440-47-3	Chromium	4.46	0.476	0.191	mg/Kg			1	6020A
7440-48-4	Cobalt	6.56	0.476	0.191	mg/Kg			1	6020A
7440-50-8	Copper	3.96	0.476	0.191	mg/Kg			1	6020A
7439-89-6	Iron	10500	4.76	1.91	mg/Kg		B	1	6020A
7439-92-1	Lead	11.5	0.476	0.191	mg/Kg			1	6020A
7439-95-4	Magnesium	130	47.6	23.8	mg/Kg			1	6020A
7439-96-5	Manganese	1020	2.38	0.953	mg/Kg			5	6020A
7440-02-0	Nickel	5.69	0.476	0.191	mg/Kg			1	6020A
7440-09-7	Potassium	181	47.6	23.8	mg/Kg			1	6020A
7782-49-2	Selenium	0.953	2.38	0.953	mg/Kg	U		5	6020A
7440-22-4	Silver	0.0953	0.476	0.0953	mg/Kg	U		1	6020A
7440-23-5	Sodium	68.8	47.6	23.8	mg/Kg			1	6020A
7440-28-0	Thallium	0.191	0.476	0.191	mg/Kg	U		1	6020A
7440-62-2	Vanadium	10.2	0.476	0.191	mg/Kg			1	6020A
7440-66-6	Zinc	43.6	23.8	9.53	mg/Kg			5	6020A
7439-97-6	Mercury	0.0355	0.0975	0.0292	mg/Kg		JRP	1	7471B

10/12/17

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: West-02 | Lab Sample ID: 490-137889-4

Lab Name: TestAmerica Nashville | Job No.: 490-137889-1

SDG ID.:

Matrix: Solid | Date Sampled: 10/02/2017 14:20

Reporting Basis: DRY | Date Received: 10/03/2017 10:05

% Solids: 98.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	3480	5.07	2.03	mg/Kg			1	6020A
7440-36-0	Antimony	0.300	0.507	0.203	mg/Kg	J	JQ	UB 1	6020A
7440-38-2	Arsenic	2.19	0.507	0.203	mg/Kg			1	6020A
7440-39-3	Barium	35.3	0.507	0.203	mg/Kg			1	6020A
7440-41-7	Beryllium	0.214	0.507	0.203	mg/Kg	J	JQ	1	6020A
7440-43-9	Cadmium	0.253	0.507	0.203	mg/Kg	J	JQ	1	6020A
7440-70-2	Calcium	1010	50.7	25.4	mg/Kg			1	6020A
7440-47-3	Chromium	5.74	0.507	0.203	mg/Kg			1	6020A
7440-48-4	Cobalt	2.36	0.507	0.203	mg/Kg			1	6020A
7440-50-8	Copper	4.53	0.507	0.203	mg/Kg			1	6020A
7439-89-6	Iron	7690	5.07	2.03	mg/Kg		F	1	6020A
7439-92-1	Lead	36.9	0.507	0.203	mg/Kg			1	6020A
7439-95-4	Magnesium	431	50.7	25.4	mg/Kg			1	6020A
7439-96-5	Manganese	90.5	0.507	0.203	mg/Kg			1	6020A
7440-02-0	Nickel	3.80	0.507	0.203	mg/Kg			1	6020A
7440-09-7	Potassium	337	50.7	25.4	mg/Kg			1	6020A
7782-49-2	Selenium	0.337	0.507	0.203	mg/Kg	J	JQ	1	6020A
7440-22-4	Silver	0.101	0.507	0.101	mg/Kg	U		1	6020A
7440-23-5	Sodium	736	50.7	25.4	mg/Kg			1	6020A
7440-28-0	Thallium	0.203	0.507	0.203	mg/Kg	U		1	6020A
7440-62-2	Vanadium	14.7	0.507	0.203	mg/Kg			1	6020A
7440-66-6	Zinc	31.9	5.07	2.03	mg/Kg			1	6020A
7439-97-6	Mercury	0.0385	0.100	0.0301	mg/Kg	J	JQ	1	7471B

10/12/17

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: North
Lab Sample ID: 490-137889-5
Lab Name: TestAmerica Nashville
Job No.: 490-137889-1
SDG ID.:
Matrix: Solid
Date Sampled: 10/02/2017 14:30
Reporting Basis: DRY
Date Received: 10/03/2017 10:05
% Solids: 98.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	2000	4.98	1.99	mg/Kg			1	6020A
7440-36-0	Antimony	0.314	0.498	0.199	mg/Kg	J	JQ UB	1	6020A
7440-38-2	Arsenic	1.41	0.498	0.199	mg/Kg			1	6020A
7440-39-3	Barium	28.1	0.498	0.199	mg/Kg			1	6020A
7440-41-7	Beryllium	0.199	0.498	0.199	mg/Kg	U		1	6020A
7440-43-9	Cadmium	0.199	0.498	0.199	mg/Kg	U		1	6020A
7440-70-2	Calcium	281	49.8	24.9	mg/Kg			1	6020A
7440-47-3	Chromium	4.13	0.498	0.199	mg/Kg			1	6020A
7440-48-4	Cobalt	1.14	0.498	0.199	mg/Kg			1	6020A
7440-50-8	Copper	2.71	0.498	0.199	mg/Kg			1	6020A
7439-89-6	Iron	5260	4.98	1.99	mg/Kg		J	1	6020A
7439-92-1	Lead	24.9	0.498	0.199	mg/Kg			1	6020A
7439-95-4	Magnesium	203	49.8	24.9	mg/Kg			1	6020A
7439-96-5	Manganese	42.2	0.498	0.199	mg/Kg			1	6020A
7440-02-0	Nickel	2.13	0.498	0.199	mg/Kg			1	6020A
7440-09-7	Potassium	198	49.8	24.9	mg/Kg			1	6020A
7782-49-2	Selenium	0.218	0.498	0.199	mg/Kg	J	JQ	1	6020A
7440-22-4	Silver	0.0996	0.498	0.0996	mg/Kg	U		1	6020A
7440-23-5	Sodium	24.9	49.8	24.9	mg/Kg	U		1	6020A
7440-28-0	Thallium	0.199	0.498	0.199	mg/Kg	U		1	6020A
7440-62-2	Vanadium	10.0	0.498	0.199	mg/Kg			1	6020A
7440-66-6	Zinc	16.2	4.98	1.99	mg/Kg			1	6020A
7439-97-6	Mercury	0.0482	0.100	0.0301	mg/Kg	J	JQ	1	7471B

10/12/17

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: South
Lab Sample ID: 490-137889-6
Lab Name: TestAmerica Nashville
Job No.: 490-137889-1
SDG ID.:
Matrix: Solid
Date Sampled: 10/02/2017 14:45
Reporting Basis: DRY
Date Received: 10/03/2017 10:05
% Solids: 97.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	3610	5.09	2.04	mg/Kg			1	6020A
7440-36-0	Antimony	0.351	0.509	0.204	mg/Kg	J	JQ	UB 1	6020A
7440-38-2	Arsenic	2.53	0.509	0.204	mg/Kg			1	6020A
7440-39-3	Barium	71.1	0.509	0.204	mg/Kg			1	6020A
7440-41-7	Beryllium	0.252	0.509	0.204	mg/Kg	J	JQ	1	6020A
7440-43-9	Cadmium	0.212	0.509	0.204	mg/Kg	J	JQ	1	6020A
7440-70-2	Calcium	425	50.9	25.4	mg/Kg			1	6020A
7440-47-3	Chromium	6.05	0.509	0.204	mg/Kg			1	6020A
7440-48-4	Cobalt	2.18	0.509	0.204	mg/Kg			1	6020A
7440-50-8	Copper	4.97	0.509	0.204	mg/Kg			1	6020A
7439-89-6	Iron	10500	5.09	2.04	mg/Kg		F	1	6020A
7439-92-1	Lead	36.4	0.509	0.204	mg/Kg			1	6020A
7439-95-4	Magnesium	302	50.9	25.4	mg/Kg			1	6020A
7439-96-5	Manganese	53.7	0.509	0.204	mg/Kg			1	6020A
7440-02-0	Nickel	3.07	0.509	0.204	mg/Kg			1	6020A
7440-09-7	Potassium	358	50.9	25.4	mg/Kg			1	6020A
7782-49-2	Selenium	0.373	0.509	0.204	mg/Kg	J	JQ	1	6020A
7440-22-4	Silver	0.102	0.509	0.102	mg/Kg	U		1	6020A
7440-23-5	Sodium	25.4	50.9	25.4	mg/Kg	U		1	6020A
7440-28-0	Thallium	0.204	0.509	0.204	mg/Kg	U		1	6020A
7440-62-2	Vanadium	13.2	0.509	0.204	mg/Kg			1	6020A
7440-66-6	Zinc	20.6	5.09	2.04	mg/Kg			1	6020A
7439-97-6	Mercury	0.0539	0.100	0.0301	mg/Kg	J	JQ	1	7471B

10/12/17

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Nashville Job No.: 490-137889-1

SDG No.:

Client Sample ID: WOR006-012-36-171002-56 Lab Sample ID: 490-137889-1

Matrix: Solid Lab File ID: 100317-025.D

Analysis Method: 8270D SIM Date Collected: 10/02/2017 08:00

Extract. Method: 3550C Date Extracted: 10/03/2017 12:54

Sample wt/vol: 30.35(g) Date Analyzed: 10/03/2017 17:26

Con. Extract Vol.: 1.00(mL) Dilution Factor: 10

Injection Volume: 3(uL) Level: (low/med) Low

% Moisture: 9.9 GPC Cleanup:(Y/N) N

Analysis Batch No.: 464885 Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-73-7	Fluorene	0.308		0.0549	0.0384
208-96-8	Acenaphthylene	0.0198	U	0.0362	0.0198
85-01-8	Phenanthrene	0.644		0.0362	0.0187
120-12-7	Anthracene	0.0143	U	0.0362	0.0143
91-57-6	2-Methylnaphthalene	1.60		0.0362	0.0230
129-00-0	Pyrene	0.364		0.0362	0.0165
91-20-3	Naphthalene	0.269		0.0362	0.0241
206-44-0	Fluoranthene	0.0889		0.0362	0.0154
90-12-0	1-Methylnaphthalene	0.983		0.0362	0.0198
56-55-3	Benzo[a]anthracene	0.148		0.0362	0.0132
218-01-9	Chrysene	0.335		0.0362	0.0132
83-32-9	Acenaphthene	0.228		0.0362	0.0241

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	109		29-120
4165-60-0	Nitrobenzene-d5	247	X	27-120
1718-51-0	Terphenyl-d14	85		13-120

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Nashville | Job No.: 490-137889-1

SDG No.:

Client Sample ID: WOR006-012-36-171002-56 | Lab Sample ID: 490-137889-1

Matrix: Solid | Lab File ID: 100417-004.D

Analysis Method: 8270D SIM | Date Collected: 10/02/2017 08:00

Extract. Method: 3550C | Date Extracted: 10/03/2017 12:54

Sample wt/vol: 30.35(g) | Date Analyzed: 10/04/2017 10:26

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 25

Injection Volume: 3(uL) | Level: (low/med) Low

% Moisture: 9.9 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 465270 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
50-32-8	Benzo[a]pyrene	0.0934		0.0905	0.0357
191-24-2	Benzo[g,h,i]perylene	0.0541	J JQ	0.0905	0.0384
207-08-9	Benzo[k]fluoranthene	0.0494	U	0.0905	0.0494
53-70-3	Dibenz(a,h)anthracene	0.0412	U	0.0905	0.0412
193-39-5	Indeno[1,2,3-cd]pyrene	0.0439	U	0.0905	0.0439
205-99-2	Benzo[b]fluoranthene	0.146		0.0905	0.0604

10/27/17

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Nashville | Job No.: 490-137889-1

SDG No.:

Client Sample ID: WOR006-011-36-171002-56 | Lab Sample ID: 490-137889-2

Matrix: Solid | Lab File ID: 100317-026.D

Analysis Method: 8270D SIM | Date Collected: 10/02/2017 08:20

Extract. Method: 3550C | Date Extracted: 10/03/2017 12:54

Sample wt/vol: 30.05(g) | Date Analyzed: 10/03/2017 17:46

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 10

Injection Volume: 3(uL) | Level: (low/med) Low

% Moisture: 12.3 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 464885 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-73-7	Fluorene	0.141		0.0569	0.0398
208-96-8	Acenaphthylene	0.0205	U	0.0376	0.0205
85-01-8	Phenanthrene	0.316		0.0376	0.0193
120-12-7	Anthracene	0.0148	U	0.0376	0.0148
91-57-6	2-Methylnaphthalene	0.158		0.0376	0.0239
129-00-0	Pyrene	0.179		0.0376	0.0171
91-20-3	Naphthalene	0.0250	U	0.0376	0.0250
206-44-0	Fluoranthene	0.0658		0.0376	0.0159
90-12-0	1-Methylnaphthalene	0.145		0.0376	0.0205
56-55-3	Benzo[a]anthracene	0.0638		0.0376	0.0137
218-01-9	Chrysene	0.226		0.0376	0.0137
83-32-9	Acenaphthene	0.0250	U	0.0376	0.0250

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	97		29-120
4165-60-0	Nitrobenzene-d5	255	X	27-120
1718-51-0	Terphenyl-d14	95		13-120

10/24/17

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Nashville | Job No.: 490-137889-1

SDG No.:

Client Sample ID: WOR006-011-36-171002-56 | Lab Sample ID: 490-137889-2

Matrix: Solid | Lab File ID: 100417-005.D

Analysis Method: 8270D SIM | Date Collected: 10/02/2017 08:20

Extract. Method: 3550C | Date Extracted: 10/03/2017 12:54

Sample wt/vol: 30.05(g) | Date Analyzed: 10/04/2017 10:46

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 25

Injection Volume: 3(uL) | Level: (low/med) Low

% Moisture: 12.3 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 465270 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
50-32-8	Benzo[a]pyrene	0.0370	U	0.0939	0.0370
191-24-2	Benzo[g,h,i]perylene	0.0398	U	0.0939	0.0398
207-08-9	Benzo[k]fluoranthene	0.0512	U	0.0939	0.0512
53-70-3	Dibenz(a,h)anthracene	0.0427	U	0.0939	0.0427
193-39-5	Indeno[1,2,3-cd]pyrene	0.0455	U	0.0939	0.0455
205-99-2	Benzo[b]fluoranthene	0.0739	J JP	0.0939	0.0626

10/12/17

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Nashville | Job No.: 490-137889-1

SDG No.:

Client Sample ID: West-01 | Lab Sample ID: 490-137889-3

Matrix: Solid | Lab File ID: 100317-027.D

Analysis Method: 8270D SIM | Date Collected: 10/02/2017 14:10

Extract. Method: 3550C | Date Extracted: 10/03/2017 12:54

Sample wt/vol: 30.11(g) | Date Analyzed: 10/03/2017 18:06

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 10

Injection Volume: 3(uL) | Level: (low/med) Low

% Moisture: 1.5 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 464885 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
50-32-8	Benzo[a]pyrene	0.118	JH	0.0334	0.0132
86-73-7	Fluorene	0.0474	JQ	0.0506	0.0354
208-96-8	Acenaphthylene	0.0182	U	0.0334	0.0182
191-24-2	Benzo[g,h,i]perylene	0.132	JH	0.0334	0.0142
85-01-8	Phenanthrene	0.386		0.0334	0.0172
207-08-9	Benzo[k]fluoranthene	0.0335	JH	0.0334	0.0182
120-12-7	Anthracene	0.0132	U	0.0334	0.0132
91-57-6	2-Methylnaphthalene	0.0655		0.0334	0.0212
129-00-0	Pyrene	0.315		0.0334	0.0152
53-70-3	Dibenz(a,h)anthracene	0.0466	JH	0.0334	0.0152
91-20-3	Naphthalene	0.0223	U	0.0334	0.0223
206-44-0	Fluoranthene	0.0547		0.0334	0.0142
90-12-0	1-Methylnaphthalene	0.0182	U	0.0334	0.0182
56-55-3	Benzo[a]anthracene	0.124		0.0334	0.0121
193-39-5	Indeno[1,2,3-cd]pyrene	0.106	JH	0.0334	0.0162
218-01-9	Chrysene	0.396		0.0334	0.0121
83-32-9	Acenaphthene	0.0223	U	0.0334	0.0223
205-99-2	Benzo[b]fluoranthene	0.144	JH	0.0334	0.0223

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	19	X	29-120
4165-60-0	Nitrobenzene-d5	32		27-120
1718-51-0	Terphenyl-d14	15		13-120

10/12/17

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Nashville | Job No.: 490-137889-1

SDG No.:

Client Sample ID: West-02 | Lab Sample ID: 490-137889-4

Matrix: Solid | Lab File ID: 100317-028.D

Analysis Method: 8270D SIM | Date Collected: 10/02/2017 14:20

Extract. Method: 3550C | Date Extracted: 10/03/2017 12:54

Sample wt/vol: 30.15(g) | Date Analyzed: 10/03/2017 18:26

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 10

Injection Volume: 3(uL) | Level: (low/med) Low

% Moisture: 1.4 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 464885 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
50-32-8	Benzo[a]pyrene	0.0731	JN	0.0333	0.0131
86-73-7	Fluorene	0.0353	U	0.0505	0.0353
208-96-8	Acenaphthylene	0.0247	JQ	0.0333	0.0182
191-24-2	Benzo[g,h,i]perylene	0.136	JN	0.0333	0.0141
85-01-8	Phenanthrene	0.0318	JQ	0.0333	0.0172
207-08-9	Benzo[k]fluoranthene	0.0395	JH	0.0333	0.0182
120-12-7	Anthracene	0.0131	U	0.0333	0.0131
91-57-6	2-Methylnaphthalene	0.0212	U	0.0333	0.0212
129-00-0	Pyrene	0.0959		0.0333	0.0151
53-70-3	Dibenz(a,h)anthracene	0.0151	U	0.0333	0.0151
91-20-3	Naphthalene	0.0222	U	0.0333	0.0222
206-44-0	Fluoranthene	0.0624		0.0333	0.0141
90-12-0	1-Methylnaphthalene	0.0182	U	0.0333	0.0182
56-55-3	Benzo[a]anthracene	0.0570		0.0333	0.0121
193-39-5	Indeno[1,2,3-cd]pyrene	0.0954	JH	0.0333	0.0162
218-01-9	Chrysene	0.195		0.0333	0.0121
83-32-9	Acenaphthene	0.0222	U	0.0333	0.0222
205-99-2	Benzo[b]fluoranthene	0.139	JH	0.0333	0.0222

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	19	X	29-120
4165-60-0	Nitrobenzene-d5	17	X	27-120
1718-51-0	Terphenyl-d14	20		13-120

10/12/17

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Nashville | Job No.: 490-137889-1

SDG No.:

Client Sample ID: North | Lab Sample ID: 490-137889-5

Matrix: Solid | Lab File ID: 100317-029.D

Analysis Method: 8270D SIM | Date Collected: 10/02/2017 14:30

Extract. Method: 3550C | Date Extracted: 10/03/2017 12:54

Sample wt/vol: 30.27(g) | Date Analyzed: 10/03/2017 18:46

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 25

Injection Volume: 3(uL) | Level: (low/med) Low

% Moisture: 1.6 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 464885 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
50-32-8	Benzo[a]pyrene	0.0363	J JQ	0.0831	0.0327
86-73-7	Fluorene	0.0881	U	0.126	0.0881
208-96-8	Acenaphthylene	0.0453	U	0.0831	0.0453
191-24-2	Benzo[g,h,i]perylene	0.0613	J JQ	0.0831	0.0352
85-01-8	Phenanthrene	0.0428	U	0.0831	0.0428
207-08-9	Benzo[k]fluoranthene	0.0453	U	0.0831	0.0453
120-12-7	Anthracene	0.0327	U	0.0831	0.0327
91-57-6	2-Methylnaphthalene	0.0529	U	0.0831	0.0529
129-00-0	Pyrene	0.0474	J JQ	0.0831	0.0378
53-70-3	Dibenz(a,h)anthracene	0.0378	U	0.0831	0.0378
91-20-3	Naphthalene	0.0554	U	0.0831	0.0554
206-44-0	Fluoranthene	0.0352	U	0.0831	0.0352
90-12-0	1-Methylnaphthalene	0.0453	U	0.0831	0.0453
56-55-3	Benzo[a]anthracene	0.0302	U	0.0831	0.0302
193-39-5	Indeno[1,2,3-cd]pyrene	0.0458	J JQ	0.0831	0.0403
218-01-9	Chrysene	0.105		0.0831	0.0302
83-32-9	Acenaphthene	0.0554	U	0.0831	0.0554
205-99-2	Benzo[b]fluoranthene	0.0739	J JQ	0.0831	0.0554

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	6	X	29-120
4165-60-0	Nitrobenzene-d5	5	X	27-120
1718-51-0	Terphenyl-d14	8	X	13-120

10/27/17

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Nashville | Job No.: 490-137889-1

SDG No.:

Client Sample ID: South | Lab Sample ID: 490-137889-6

Matrix: Solid | Lab File ID: 100317-030.D

Analysis Method: 8270D SIM | Date Collected: 10/02/2017 14:45

Extract. Method: 3550C | Date Extracted: 10/03/2017 12:54

Sample wt/vol: 30.18(g) | Date Analyzed: 10/03/2017 19:06

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 25

Injection Volume: 3(uL) | Level: (low/med) Low

% Moisture: 2.2 | GPC Cleanup:(Y/N) N

Analysis Batch.No.: 464885 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
50-32-8	Benzo[a]pyrene	0.223		0.0838	0.0330
86-73-7	Fluorene	0.0889	U	0.127	0.0889
208-96-8	Acenaphthylene	0.104		0.0838	0.0457
191-24-2	Benzo[g,h,i]perylene	0.281		0.0838	0.0356
85-01-8	Phenanthrene	0.0458	JQ	0.0838	0.0432
207-08-9	Benzo[k]fluoranthene	0.131		0.0838	0.0457
120-12-7	Anthracene	0.0613	JQ	0.0838	0.0330
91-57-6	2-Methylnaphthalene	0.0533	U	0.0838	0.0533
129-00-0	Pyrene	0.218		0.0838	0.0381
53-70-3	Dibenz(a,h)anthracene	0.0620	JQ	0.0838	0.0381
91-20-3	Naphthalene	0.0559	U	0.0838	0.0559
206-44-0	Fluoranthene	0.169		0.0838	0.0356
90-12-0	1-Methylnaphthalene	0.0457	U	0.0838	0.0457
56-55-3	Benzo[a]anthracene	0.0305	U	0.0838	0.0305
193-39-5	Indeno[1,2,3-cd]pyrene	0.249		0.0838	0.0406
218-01-9	Chrysene	0.0305	U	0.0838	0.0305
83-32-9	Acenaphthene	0.0559	U	0.0838	0.0559
205-99-2	Benzo[b]fluoranthene	0.389		0.0838	0.0559

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	14	X	29-120
4165-60-0	Nitrobenzene-d5	13	X	27-120
1718-51-0	Terphenyl-d14	17		13-120

10/17/17

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Nashville | Job No.: 490-137889-1

SDG No.:

Client Sample ID: West-01 | Lab Sample ID: 490-137889-3

Matrix: Solid | Lab File ID: 100317-031.D

Analysis Method: 8270D | Date Collected: 10/02/2017 14:10

Extract. Method: 3550C | Date Extracted: 10/03/2017 12:58

Sample wt/vol: 30.02(g) | Date Analyzed: 10/03/2017 23:50

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 25

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: 1.5 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 465063 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
95-94-3	1,2,4,5-Tetrachlorobenzene	4.29	U	8.45	4.29
58-90-2	2,3,4,6-Tetrachlorophenol	4.59	U	8.45	4.59
95-95-4	2,4,5-Trichlorophenol	5.53	U	8.45	5.53
88-06-2	2,4,6-Trichlorophenol	4.87	U	8.45	4.87
120-83-2	2,4-Dichlorophenol	4.44	U	8.45	4.44
105-67-9	2,4-Dimethylphenol	8.50	U	17.0	8.50
51-28-5	2,4-Dinitrophenol	6.37	U	8.45	6.37
121-14-2	2,4-Dinitrotoluene	5.28	U	8.45	5.28
606-20-2	2,6-Dinitrotoluene	5.66	U	8.45	5.66
91-58-7	2-Chloronaphthalene	5.30	U	8.45	5.30
95-57-8	2-Chlorophenol	4.85	U	8.45	4.85
91-57-6	2-Methylnaphthalene	0.660	U	1.70	0.660
88-74-4	2-Nitroaniline	5.25	U	8.45	5.25
95-48-7	2-Methylphenol	5.48	U	8.45	5.48
88-75-5	2-Nitrophenol	6.16	U	8.45	6.16
15831-10-4	3 & 4 Methylphenol	5.15	U	8.45	5.15
91-94-1	3,3'-Dichlorobenzidine	5.18	U	17.0	5.18
99-09-2	3-Nitroaniline	5.84	U	17.0	5.84
534-52-1	4,6-Dinitro-2-methylphenol	5.81	U	8.45	5.81
101-55-3	4-Bromophenyl phenyl ether	5.20	U	8.45	5.20
59-50-7	4-Chloro-3-methylphenol	4.26	U	8.45	4.26
106-47-8	4-Chloroaniline	5.76	U	8.45	5.76
7005-72-3	4-Chlorophenyl phenyl ether	5.10	U	8.45	5.10
100-01-6	4-Nitroaniline	6.04	U	17.0	6.04
100-02-7	4-Nitrophenol	9.69	U	17.0	9.69
83-32-9	Acenaphthene	0.812	U	1.70	0.812
208-96-8	Acenaphthylene	0.736	U	1.70	0.736
98-86-2	Acetophenone	4.72	U	8.45	4.72
120-12-7	Anthracene	0.736	U	1.70	0.736
1912-24-9	Atrazine	4.26	U	8.45	4.26
56-55-3	Benzo[a]anthracene	0.761	U	1.70	0.761
50-32-8	Benzo[a]pyrene	0.685	U	1.70	0.685
205-99-2	Benzo[b]fluoranthene	0.710	U	1.70	0.710
191-24-2	Benzo[g,h,i]perylene	0.837	U	1.70	0.837

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Nashville | Job No.: 490-137889-1

SDG No.:

Client Sample ID: West-01 | Lab Sample ID: 490-137889-3

Matrix: Solid | Lab File ID: 100317-031.D

Analysis Method: 8270D | Date Collected: 10/02/2017 14:10

Extract. Method: 3550C | Date Extracted: 10/03/2017 12:58

Sample wt/vol: 30.02(g) | Date Analyzed: 10/03/2017 23:50

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 25

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: 1.5 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 465063 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
207-08-9	Benzo[k]fluoranthene	0.685	U	1.70	0.685
100-52-7	Benzaldehyde	6.44	~~U~~ UJK	17.0	6.44
111-91-1	Bis(2-chloroethoxy)methane	5.07	U	8.45	5.07
92-52-4	Biphenyl	4.79	U	8.45	4.79
111-44-4	Bis(2-chloroethyl)ether	5.40	U	8.45	5.40
108-60-1	bis (2-chloroisopropyl) ether	5.02	U	8.45	5.02
85-68-7	Butyl benzyl phthalate	5.45	U	8.45	5.45
117-81-7	Bis(2-ethylhexyl) phthalate	5.25	U	8.45	5.25
86-74-8	Carbazole	5.25	U	8.45	5.25
105-60-2	Caprolactam	3.93	U	8.45	3.93
218-01-9	Chrysene	0.939	U	1.70	0.939
53-70-3	Dibenz(a,h)anthracene	0.812	U	1.70	0.812
132-64-9	Dibenzofuran	5.33	U	8.45	5.33
84-66-2	Diethyl phthalate	5.38	U	8.45	5.38
131-11-3	Dimethyl phthalate	5.25	U	8.45	5.25
84-74-2	Di-n-butyl phthalate	5.35	U	8.45	5.35
86-73-7	Fluorene	0.736	U	1.70	0.736
117-84-0	Di-n-octyl phthalate	4.52	U	8.45	4.52
118-74-1	Hexachlorobenzene	6.34	U	8.45	6.34
87-68-3	Hexachlorobutadiene	4.24	U	8.45	4.24
77-47-4	Hexachlorocyclopentadiene	3.81	~~U~~ UJK	8.45	3.81
67-72-1	Hexachloroethane	4.59	U	8.45	4.59
193-39-5	Indeno[1,2,3-cd]pyrene	0.736	U	1.70	0.736
78-59-1	Isophorone	4.77	U	8.45	4.77
91-20-3	Naphthalene	0.736	U	1.70	0.736
98-95-3	Nitrobenzene	5.10	U	8.45	5.10
621-64-7	N-Nitrosodi-n-propylamine	4.92	U	8.45	4.92
86-30-6	n-Nitrosodiphenylamine(as diphenylamine)	1.34	U	8.45	1.34
87-86-5	Pentachlorophenol	6.75	U	17.0	6.75
85-01-8	Phenanthrene	0.863	U	1.70	0.863
108-95-2	Phenol	5.15	U	8.45	5.15
129-00-0	Pyrene	0.863	U	1.70	0.863
206-44-0	Fluoranthene	0.863	U	1.70	0.863
120-82-1	1,2,4-Trichlorobenzene	4.59	U	8.45	4.59

SB 10/12/17

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Nashville | Job No.: 490-137889-1

SDG No.:

Client Sample ID: West-01 | Lab Sample ID: 490-137889-3

Matrix: Solid | Lab File ID: 100317-031.D

Analysis Method: 8270D | Date Collected: 10/02/2017 14:10

Extract. Method: 3550C | Date Extracted: 10/03/2017 12:58

Sample wt/vol: 30.02(g) | Date Analyzed: 10/03/2017 23:50

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 25

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: 1.5 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 465063 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
95-50-1	1,2-Dichlorobenzene	4.82	U	8.45	4.82
541-73-1	1,3-Dichlorobenzene	4.82	U	8.45	4.82
106-46-7	1,4-Dichlorobenzene	4.97	U	8.45	4.97
92-87-5	Benzidine	5.18	~~U~~ UJL	8.45	5.18
100-51-6	Benzyl alcohol	4.92	U	8.45	4.92
62-75-9	N-Nitrosodimethylamine	0.507	U	8.45	0.507

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	84		10-120
321-60-8	2-Fluorobiphenyl (Surr)	40		29-120
367-12-4	2-Fluorophenol (Surr)	45		10-120
4165-60-0	Nitrobenzene-d5 (Surr)	41		27-120
4165-62-2	Phenol-d5 (Surr)	33		10-120
1718-51-0	Terphenyl-d14 (Surr)	43		13-120

FORM I 8270D

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FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Nashville | Job No.: 490-137889-1

SDG No.:

Client Sample ID: West-02 | Lab Sample ID: 490-137889-4

Matrix: Solid | Lab File ID: 100317-032.D

Analysis Method: 8270D | Date Collected: 10/02/2017 14:20

Extract. Method: 3550C | Date Extracted: 10/03/2017 12:58

Sample wt/vol: 30.19(g) | Date Analyzed: 10/04/2017 00:09

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 25

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: 1.4 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 465063 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
95-94-3	1,2,4,5-Tetrachlorobenzene	4.26	U	8.39	4.26
58-90-2	2,3,4,6-Tetrachlorophenol	4.56	U	8.39	4.56
95-95-4	2,4,5-Trichlorophenol	5.49	U	8.39	5.49
88-06-2	2,4,6-Trichlorophenol	4.84	U	8.39	4.84
120-83-2	2,4-Dichlorophenol	4.41	U	8.39	4.41
105-67-9	2,4-Dimethylphenol	8.44	U	16.9	8.44
51-28-5	2,4-Dinitrophenol	6.33	U	8.39	6.33
121-14-2	2,4-Dinitrotoluene	5.24	U	8.39	5.24
606-20-2	2,6-Dinitrotoluene	5.62	U	8.39	5.62
91-58-7	2-Chloronaphthalene	5.27	U	8.39	5.27
95-57-8	2-Chlorophenol	4.81	U	8.39	4.81
91-57-6	2-Methylnaphthalene	0.655	U	1.69	0.655
88-74-4	2-Nitroaniline	5.22	U	8.39	5.22
95-48-7	2-Methylphenol	5.44	U	8.39	5.44
88-75-5	2-Nitrophenol	6.12	U	8.39	6.12
15831-10-4	3 & 4 Methylphenol	5.12	U	8.39	5.12
91-94-1	3,3'-Dichlorobenzidine	5.14	U	16.9	5.14
99-09-2	3-Nitroaniline	5.80	U	16.9	5.80
534-52-1	4,6-Dinitro-2-methylphenol	5.77	U	8.39	5.77
101-55-3	4-Bromophenyl phenyl ether	5.17	U	8.39	5.17
59-50-7	4-Chloro-3-methylphenol	4.23	U	8.39	4.23
106-47-8	4-Chloroaniline	5.72	U	8.39	5.72
7005-72-3	4-Chlorophenyl phenyl ether	5.07	U	8.39	5.07
100-01-6	4-Nitroaniline	6.00	U	16.9	6.00
100-02-7	4-Nitrophenol	9.63	U	16.9	9.63
83-32-9	Acenaphthene	0.806	U	1.69	0.806
208-96-8	Acenaphthylene	0.731	U	1.69	0.731
98-86-2	Acetophenone	4.69	U	8.39	4.69
120-12-7	Anthracene	0.731	U	1.69	0.731
1912-24-9	Atrazine	4.23	U	8.39	4.23
56-55-3	Benzo[a]anthracene	0.756	U	1.69	0.756
50-32-8	Benzo[a]pyrene	0.680	U	1.69	0.680
205-99-2	Benzo[b]fluoranthene	0.706	U	1.69	0.706
191-24-2	Benzo[g,h,i]perylene	0.832	U	1.69	0.832

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Nashville | Job No.: 490-137889-1

SDG No.:

Client Sample ID: West-02 | Lab Sample ID: 490-137889-4

Matrix: Solid | Lab File ID: 100317-032.D

Analysis Method: 8270D | Date Collected: 10/02/2017 14:20

Extract. Method: 3550C | Date Extracted: 10/03/2017 12:58

Sample wt/vol: 30.19(g) | Date Analyzed: 10/04/2017 00:09

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 25

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: 1.4 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 465063 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
207-08-9	Benzo[k]fluoranthene	0.680	U	1.69	0.680
100-52-7	Benzaldehyde	6.40	~~U~~ UJK	16.9	6.40
111-91-1	Bis(2-chloroethoxy)methane	5.04	U	8.39	5.04
92-52-4	Biphenyl	4.76	U	8.39	4.76
111-44-4	Bis(2-chloroethyl)ether	5.37	U	8.39	5.37
108-60-1	bis (2-chloroisopropyl) ether	4.99	U	8.39	4.99
85-68-7	Butyl benzyl phthalate	5.42	U	8.39	5.42
117-81-7	Bis(2-ethylhexyl) phthalate	5.22	U	8.39	5.22
86-74-8	Carbazole	5.22	U	8.39	5.22
105-60-2	Caprolactam	3.91	U	8.39	3.91
218-01-9	Chrysene	0.932	U	1.69	0.932
53-70-3	Dibenz(a,h)anthracene	0.806	U	1.69	0.806
132-64-9	Dibenzofuran	5.29	U	8.39	5.29
84-66-2	Diethyl phthalate	5.34	U	8.39	5.34
131-11-3	Dimethyl phthalate	5.22	U	8.39	5.22
84-74-2	Di-n-butyl phthalate	5.32	U	8.39	5.32
86-73-7	Fluorene	0.731	U	1.69	0.731
117-84-0	Di-n-octyl phthalate	4.49	U	8.39	4.49
118-74-1	Hexachlorobenzene	6.30	U	8.39	6.30
87-68-3	Hexachlorobutadiene	4.21	U	8.39	4.21
77-47-4	Hexachlorocyclopentadiene	3.78	~~U~~ UJK	8.39	3.78
67-72-1	Hexachloroethane	4.56	U	8.39	4.56
193-39-5	Indeno[1,2,3-cd]pyrene	0.731	U	1.69	0.731
78-59-1	Isophorone	4.74	U	8.39	4.74
91-20-3	Naphthalene	0.731	U	1.69	0.731
98-95-3	Nitrobenzene	5.07	U	8.39	5.07
621-64-7	N-Nitrosodi-n-propylamine	4.89	U	8.39	4.89
86-30-6	n-Nitrosodiphenylamine(as diphenylamine)	1.34	U	8.39	1.34
87-86-5	Pentachlorophenol	6.70	U	16.9	6.70
85-01-8	Phenanthrene	0.857	U	1.69	0.857
108-95-2	Phenol	5.12	U	8.39	5.12
129-00-0	Pyrene	0.857	U	1.69	0.857
206-44-0	Fluoranthene	0.857	U	1.69	0.857
120-82-1	1,2,4-Trichlorobenzene	4.56	U	8.39	4.56

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Nashville | Job No.: 490-137889-1

SDG No.:

Client Sample ID: West-02 | Lab Sample ID: 490-137889-4

Matrix: Solid | Lab File ID: 100317-032.D

Analysis Method: 8270D | Date Collected: 10/02/2017 14:20

Extract. Method: 3550C | Date Extracted: 10/03/2017 12:58

Sample wt/vol: 30.19(g) | Date Analyzed: 10/04/2017 00:09

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 25

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: 1.4 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 465063 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
95-50-1	1,2-Dichlorobenzene	4.79	U	8.39	4.79
541-73-1	1,3-Dichlorobenzene	4.79	U	8.39	4.79
106-46-7	1,4-Dichlorobenzene	4.94	U	8.39	4.94
92-87-5	Benzidine	5.14	~~U~~ UJ	8.39	5.14
100-51-6	Benzyl alcohol	4.89	U	8.39	4.89
62-75-9	N-Nitrosodimethylamine	0.504	U	8.39	0.504

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	67		10-120
321-60-8	2-Fluorobiphenyl (Surr)	10	X	29-120
367-12-4	2-Fluorophenol (Surr)	16		10-120
4165-60-0	Nitrobenzene-d5 (Surr)	12	X	27-120
4165-62-2	Phenol-d5 (Surr)	9	X	10-120
1718-51-0	Terphenyl-d14 (Surr)	13		13-120

10/12/17

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Nashville | Job No.: 490-137889-1

SDG No.:

Client Sample ID: North | Lab Sample ID: 490-137889-5

Matrix: Solid | Lab File ID: 100317-033.D

Analysis Method: 8270D | Date Collected: 10/02/2017 14:30

Extract. Method: 3550C | Date Extracted: 10/03/2017 12:58

Sample wt/vol: 30.14(g) | Date Analyzed: 10/04/2017 00:29

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 25

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: 1.6 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 465063 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
95-94-3	1,2,4,5-Tetrachlorobenzene	4.27	U	8.42	4.27
58-90-2	2,3,4,6-Tetrachlorophenol	4.58	U	8.42	4.58
95-95-4	2,4,5-Trichlorophenol	5.51	U	8.42	5.51
88-06-2	2,4,6-Trichlorophenol	4.85	U	8.42	4.85
120-83-2	2,4-Dichlorophenol	4.42	U	8.42	4.42
105-67-9	2,4-Dimethylphenol	8.47	U	16.9	8.47
51-28-5	2,4-Dinitrophenol	6.34	U	8.42	6.34
121-14-2	2,4-Dinitrotoluene	5.26	U	8.42	5.26
606-20-2	2,6-Dinitrotoluene	5.64	U	8.42	5.64
91-58-7	2-Chloronaphthalene	5.28	U	8.42	5.28
95-57-8	2-Chlorophenol	4.83	U	8.42	4.83
91-57-6	2-Methylnaphthalene	0.657	U	1.69	0.657
88-74-4	2-Nitroaniline	5.23	U	8.42	5.23
95-48-7	2-Methylphenol	5.46	U	8.42	5.46
88-75-5	2-Nitrophenol	6.14	U	8.42	6.14
15831-10-4	3 & 4 Methylphenol	5.13	U	8.42	5.13
91-94-1	3,3'-Dichlorobenzidine	5.16	U	16.9	5.16
99-09-2	3-Nitroaniline	5.81	U	16.9	5.81
534-52-1	4,6-Dinitro-2-methylphenol	5.79	U	8.42	5.79
101-55-3	4-Bromophenyl phenyl ether	5.18	U	8.42	5.18
59-50-7	4-Chloro-3-methylphenol	4.25	U	8.42	4.25
106-47-8	4-Chloroaniline	5.74	U	8.42	5.74
7005-72-3	4-Chlorophenyl phenyl ether	5.08	U	8.42	5.08
100-01-6	4-Nitroaniline	6.02	U	16.9	6.02
100-02-7	4-Nitrophenol	9.66	U	16.9	9.66
83-32-9	Acenaphthene	0.809	U	1.69	0.809
208-96-8	Acenaphthylene	0.733	U	1.69	0.733
98-86-2	Acetophenone	4.70	U	8.42	4.70
120-12-7	Anthracene	0.733	U	1.69	0.733
1912-24-9	Atrazine	4.25	U	8.42	4.25
56-55-3	Benzo[a]anthracene	0.758	U	1.69	0.758
50-32-8	Benzo[a]pyrene	0.683	U	1.69	0.683
205-99-2	Benzo[b]fluoranthene	0.708	U	1.69	0.708
191-24-2	Benzo[g,h,i]perylene	0.834	U	1.69	0.834

10/12/17

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Nashville | Job No.: 490-137889-1

SDG No.:

Client Sample ID: North | Lab Sample ID: 490-137889-5

Matrix: Solid | Lab File ID: 100317-033.D

Analysis Method: 8270D | Date Collected: 10/02/2017 14:30

Extract. Method: 3550C | Date Extracted: 10/03/2017 12:58

Sample wt/vol: 30.14(g) | Date Analyzed: 10/04/2017 00:29

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 25

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: 1.6 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 465063 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
207-08-9	Benzo[k]fluoranthene	0.683	U	1.69	0.683
100-52-7	Benzaldehyde	6.42	U UJV	16.9	6.42
111-91-1	Bis(2-chloroethoxy)methane	5.06	U	8.42	5.06
92-52-4	Biphenyl	4.78	U	8.42	4.78
111-44-4	Bis(2-chloroethyl)ether	5.38	U	8.42	5.38
108-60-1	bis (2-chloroisopropyl) ether	5.01	U	8.42	5.01
85-68-7	Butyl benzyl phthalate	5.43	U	8.42	5.43
117-81-7	Bis(2-ethylhexyl) phthalate	5.23	U	8.42	5.23
86-74-8	Carbazole	5.23	U	8.42	5.23
105-60-2	Caprolactam	3.92	U	8.42	3.92
218-01-9	Chrysene	0.935	U	1.69	0.935
53-70-3	Dibenz(a,h)anthracene	0.809	U	1.69	0.809
132-64-9	Dibenzofuran	5.31	U	8.42	5.31
84-66-2	Diethyl phthalate	5.36	U	8.42	5.36
131-11-3	Dimethyl phthalate	5.23	U	8.42	5.23
84-74-2	Di-n-butyl phthalate	5.33	U	8.42	5.33
86-73-7	Fluorene	0.733	U	1.69	0.733
117-84-0	Di-n-octyl phthalate	4.50	U	8.42	4.50
118-74-1	Hexachlorobenzene	6.32	U	8.42	6.32
87-68-3	Hexachlorobutadiene	4.22	U	8.42	4.22
77-47-4	Hexachlorocyclopentadiene	3.79	U UJV	8.42	3.79
67-72-1	Hexachloroethane	4.58	U	8.42	4.58
193-39-5	Indeno[1,2,3-cd]pyrene	0.733	U	1.69	0.733
78-59-1	Isophorone	4.75	U	8.42	4.75
91-20-3	Naphthalene	0.733	U	1.69	0.733
98-95-3	Nitrobenzene	5.08	U	8.42	5.08
621-64-7	N-Nitrosodi-n-propylamine	4.90	U	8.42	4.90
86-30-6	n-Nitrosodiphenylamine(as diphenylamine)	1.34	U	8.42	1.34
87-86-5	Pentachlorophenol	6.72	U	16.9	6.72
85-01-8	Phenanthrene	0.859	U	1.69	0.859
108-95-2	Phenol	5.13	U	8.42	5.13
129-00-0	Pyrene	0.859	U	1.69	0.859
206-44-0	Fluoranthene	0.859	U	1.69	0.859
120-82-1	1,2,4-Trichlorobenzene	4.58	U	8.42	4.58

10/12/17

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Nashville | Job No.: 490-137889-1

SDG No.:

Client Sample ID: North | Lab Sample ID: 490-137889-5

Matrix: Solid | Lab File ID: 100317-033.D

Analysis Method: 8270D | Date Collected: 10/02/2017 14:30

Extract. Method: 3550C | Date Extracted: 10/03/2017 12:58

Sample wt/vol: 30.14(g) | Date Analyzed: 10/04/2017 00:29

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 25

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: 1.6 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 465063 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
95-50-1	1,2-Dichlorobenzene	4.80	U	8.42	4.80
541-73-1	1,3-Dichlorobenzene	4.80	U	8.42	4.80
106-46-7	1,4-Dichlorobenzene	4.95	U	8.42	4.95
92-87-5	Benzidine	5.16	~~U~~ UJV	8.42	5.16
100-51-6	Benzyl alcohol	4.90	U	8.42	4.90
62-75-9	N-Nitrosodimethylamine	0.506	U	8.42	0.506

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	58		10-120
321-60-8	2-Fluorobiphenyl (Surr)	3	X	29-120
367-12-4	2-Fluorophenol (Surr)	9	X	10-120
4165-60-0	Nitrobenzene-d5 (Surr)	3	X	27-120
4165-62-2	Phenol-d5 (Surr)	4	X	10-120
1718-51-0	Terphenyl-d14 (Surr)	5	X	13-120

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Nashville | Job No.: 490-137889-1

SDG No.:

Client Sample ID: South | Lab Sample ID: 490-137889-6

Matrix: Solid | Lab File ID: 100317-034.D

Analysis Method: 8270D | Date Collected: 10/02/2017 14:45

Extract. Method: 3550C | Date Extracted: 10/03/2017 12:58

Sample wt/vol: 30.42(g) | Date Analyzed: 10/04/2017 00:48

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 200

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: 2.2 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 465063 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
95-94-3	1,2,4,5-Tetrachlorobenzene	34.1	U	67.1	34.1
58-90-2	2,3,4,6-Tetrachlorophenol	36.5	U	67.1	36.5
95-95-4	2,4,5-Trichlorophenol	43.9	U	67.1	43.9
88-06-2	2,4,6-Trichlorophenol	38.7	U	67.1	38.7
120-83-2	2,4-Dichlorophenol	35.3	U	67.1	35.3
105-67-9	2,4-Dimethylphenol	67.5	U	135	67.5
51-28-5	2,4-Dinitrophenol	50.6	U	67.1	50.6
121-14-2	2,4-Dinitrotoluene	41.9	U	67.1	41.9
606-20-2	2,6-Dinitrotoluene	45.0	U	67.1	45.0
91-58-7	2-Chloronaphthalene	42.1	U	67.1	42.1
95-57-8	2-Chlorophenol	38.5	U	67.1	38.5
91-57-6	2-Methylnaphthalene	5.24	U	13.5	5.24
88-74-4	2-Nitroaniline	41.7	U	67.1	41.7
95-48-7	2-Methylphenol	43.5	U	67.1	43.5
88-75-5	2-Nitrophenol	49.0	U	67.1	49.0
15831-10-4	3 & 4 Methylphenol	40.9	U	67.1	40.9
91-94-1	3,3'-Dichlorobenzidine	41.1	U	135	41.1
99-09-2	3-Nitroaniline	46.4	U	135	46.4
534-52-1	4,6-Dinitro-2-methylphenol	46.2	U	67.1	46.2
101-55-3	4-Bromophenyl phenyl ether	41.3	U	67.1	41.3
59-50-7	4-Chloro-3-methylphenol	33.9	U	67.1	33.9
106-47-8	4-Chloroaniline	45.8	U	67.1	45.8
7005-72-3	4-Chlorophenyl phenyl ether	40.5	U	67.1	40.5
100-01-6	4-Nitroaniline	48.0	U	135	48.0
100-02-7	4-Nitrophenol	77.0	U	135	77.0
83-32-9	Acenaphthene	6.45	U	13.5	6.45
208-96-8	Acenaphthylene	5.85	U	13.5	5.85
98-86-2	Acetophenone	37.5	U	67.1	37.5
120-12-7	Anthracene	5.85	U	13.5	5.85
1912-24-9	Atrazine	33.9	U	67.1	33.9
56-55-3	Benzo[a]anthracene	6.05	U	13.5	6.05
50-32-8	Benzo[a]pyrene	5.44	U	13.5	5.44
205-99-2	Benzo[b]fluoranthene	5.64	U	13.5	5.64
191-24-2	Benzo[g,h,i]perylene	6.65	U	13.5	6.65

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Nashville | Job No.: 490-137889-1

SDG No.:

Client Sample ID: South | Lab Sample ID: 490-137889-6

Matrix: Solid | Lab File ID: 100317-034.D

Analysis Method: 8270D | Date Collected: 10/02/2017 14:45

Extract. Method: 3550C | Date Extracted: 10/03/2017 12:58

Sample wt/vol: 30.42(g) | Date Analyzed: 10/04/2017 00:48

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 200

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: 2.2 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 465063 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
207-08-9	Benzo[k]fluoranthene	5.44	U	13.5	5.44
100-52-7	Benzaldehyde	51.2	~~U~~ LOL	135	51.2
111-91-1	Bis(2-chloroethoxy)methane	40.3	U	67.1	40.3
92-52-4	Biphenyl	38.1	U	67.1	38.1
111-44-4	Bis(2-chloroethyl)ether	42.9	U	67.1	42.9
108-60-1	bis (2-chloroisopropyl) ether	39.9	U	67.1	39.9
85-68-7	Butyl benzyl phthalate	43.3	U	67.1	43.3
117-81-7	Bis(2-ethylhexyl) phthalate	41.7	U	67.1	41.7
86-74-8	Carbazole	41.7	U	67.1	41.7
105-60-2	Caprolactam	31.2	U	67.1	31.2
218-01-9	Chrysene	7.46	U	13.5	7.46
53-70-3	Dibenz(a,h)anthracene	6.45	U	13.5	6.45
132-64-9	Dibenzofuran	42.3	U	67.1	42.3
84-66-2	Diethyl phthalate	42.7	U	67.1	42.7
131-11-3	Dimethyl phthalate	41.7	U	67.1	41.7
84-74-2	Di-n-butyl phthalate	42.5	U	67.1	42.5
86-73-7	Fluorene	5.85	U	13.5	5.85
117-84-0	Di-n-octyl phthalate	35.9	U	67.1	35.9
118-74-1	Hexachlorobenzene	50.4	U	67.1	50.4
87-68-3	Hexachlorobutadiene	33.7	U	67.1	33.7
77-47-4	Hexachlorocyclopentadiene	30.2	~~U~~ LOL	67.1	30.2
67-72-1	Hexachloroethane	36.5	U	67.1	36.5
193-39-5	Indeno[1,2,3-cd]pyrene	5.85	U	13.5	5.85
78-59-1	Isophorone	37.9	U	67.1	37.9
91-20-3	Naphthalene	5.85	U	13.5	5.85
98-95-3	Nitrobenzene	40.5	U	67.1	40.5
621-64-7	N-Nitrosodi-n-propylamine	39.1	U	67.1	39.1
86-30-6	n-Nitrosodiphenylamine(as diphenylamine)	10.7	U	67.1	10.7
87-86-5	Pentachlorophenol	53.6	U	135	53.6
85-01-8	Phenanthrene	6.85	U	13.5	6.85
108-95-2	Phenol	40.9	U	67.1	40.9
129-00-0	Pyrene	6.85	U	13.5	6.85
206-44-0	Fluoranthene	6.85	U	13.5	6.85
120-82-1	1,2,4-Trichlorobenzene	36.5	U	67.1	36.5

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Nashville | Job No.: 490-137889-1

SDG No.:

Client Sample ID: South | Lab Sample ID: 490-137889-6

Matrix: Solid | Lab File ID: 100317-034.D

Analysis Method: 8270D | Date Collected: 10/02/2017 14:45

Extract. Method: 3550C | Date Extracted: 10/03/2017 12:58

Sample wt/vol: 30.42(g) | Date Analyzed: 10/04/2017 00:48

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 200

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: 2.2 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 465063 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
95-50-1	1,2-Dichlorobenzene	38.3	U	67.1	38.3
541-73-1	1,3-Dichlorobenzene	38.3	U	67.1	38.3
106-46-7	1,4-Dichlorobenzene	39.5	U	67.1	39.5
92-87-5	Benzidine	41.1	~~U~~ UJ	67.1	41.1
100-51-6	Benzyl alcohol	39.1	U	67.1	39.1
62-75-9	N-Nitrosodimethylamine	4.03	U	67.1	4.03

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	478	X	10-120
321-60-8	2-Fluorobiphenyl (Surr)	49		29-120
367-12-4	2-Fluorophenol (Surr)	106		10-120
4165-60-0	Nitrobenzene-d5 (Surr)	65		27-120
4165-62-2	Phenol-d5 (Surr)	42		10-120
1718-51-0	Terphenyl-d14 (Surr)	71		13-120

DATA QUALITY ASSURANCE REVIEW

SITE NAME Wilcox Oil

WORK ORDER NUMBER 20406.012.001.1065.01 TDD NUMBER 0001/17-065

PROJECT NUMBER _____ SDG NUMBER 490-137586-1

Weston Solutions, Inc. (WESTON®) has completed a QA review for Work Order Number 20406.012.001.1065.01; SDG No. 490-137586-1; Wilcox Oil. Two samples were analyzed for Target Analyte List (TAL) Metals and mercury by TestAmerica Laboratories, Inc. Sample numbers are listed below.

SAMPLE NUMBERS

Top Soil	Backfill	

This data package was validated to determine if Quality Control (QC) specifications were achieved, following *USEPA National Functional Guidelines for Organic Superfund Methods Data Review* (January, 2017), *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (January, 2017), *USEPA Contract Laboratory Program National Functional Guidelines for High Resolution Superfund Methods Data Review* (April, 2016), *Quality Assurance/Quality Control Guidance for Removal Activities* (September, 2011), and/or the Regional Protocol for Holding Times, Blanks, and VOA Preservation (April 13, 1989). Specific data qualifications are listed in the following discussion.

REVIEWER Gloria J. Switalski DATE October 6, 2017

Data Qualifiers

Data Qualifier Definitions were supplied by the Office of Solid Waste and Emergency Response (September 1989) and are included in the Functional Guidelines. Data qualifiers may be combined (UJ, QJ) with the corresponding combination of meanings. Additional qualifiers may be added to provide additional, more specific information (JL, UB, QJK), modifying the meaning of the primary qualifier. Addition qualifiers utilized by WESTON are H, L, K, B, and Q.

U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation or detection limit, which has been adjusted for sample weight/sample volume, extraction volume, percent solids, sample dilution or other analysis specific parameters.

An additional qualifier, "B", may be appended to indicate that while the analyte was detected in the sample, the presence of the analyte may be attributable to blank contamination and the analyte is therefore considered undetected with the sample detection or quantitation limit for the analyte being elevated.

J - The analyte was analyzed for, but the associated numerical value may not be consistent with the amount actually present in the environmental sample or may not be consistent with the sample detection or quantitation limit. The value is an estimated quantity. The data should be seriously considered for decision-making and are usable for many purposes.

An additional qualifier will be appended to the "J" qualifier that indicates the bias in the reported results:

L Low bias

H High bias

K Unknown bias

Q The reported concentration is less than the sample quantitation limit for the specific analyte in the sample.

The L and H qualifier will only be employed when a single qualification is required. When more than one quality control parameter affects the analytical result and a conflict results in assigning a bias, the result will be flagged JK.

R - Quality Control indicates that data are unusable for all purposes. The analyte was analyzed for, but the presence or absence of the analyte has not been verified. Resampling and reanalysis are necessary for verification to confirm or deny the presence of an analyte.

N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."

METALS DATA EVALUATION

1. Analytical Method:

Samples were prepared and analyzed for ICP metals using the procedures specified in **SW-846 Method 6020A.** Samples were prepared and analyzed for mercury using the procedures specified in **SW-846 Methods 7471B.**

2. Holding Times:

The samples were received above the recommended ≤6°C NFG limit. Professional judgment was used to not qualify the sample results. All samples met established holding time criteria of 180 days for ICP metals and 28 days for mercury. No qualifications are placed on the data.

3. Initial Calibration:

ICP initial calibration included a blank and three standards and initial calibration verification results fell within the control limits of 90% to 110% of the true values and mercury initial calibration included a blank and six standards and initial calibration verification results fell within the control limits of 85% to 115% values. No qualifications are placed on the data.

4. Continuing Calibration:

All ICP results fell within the control limits of 90% to 110% of the true values and all mercury results fell within the control limits of 85% to 115% of the true values. No qualifications are placed on the data.

5. CRDL Standard:

All results for the CRDL standard were within the control limits of 70% to 130% of the true values or the sample results were greater than the CRDL action level. No qualifications are placed on the data.

6. Blanks:

A. Laboratory Blanks:

A method blank was prepared at the required frequency of every time samples were prepared/digested for each matrix or every 20 samples whichever is greater. A target analyte was detected in the method blank. Details are noted below:

INSTRUMENT ID DATE/TIME	**ANALYTE/BLANK ID**	**CONCENTRATION**	**AFFECTED SAMPLES**
ICPMS3 9/29/17 @16:41	Aluminum/MB 490-463964/1-A	7.286 mg/kg	All Solids, remove laboratory “B” flag

MB=Method Blank

B. Field Blanks:

No field or rinsate blank samples were submitted with this analytical package. No qualifications are placed on the data.

7. ICP Interference Check:

All results for the interference check sample were within the control limits of 80% to 120% of the true values. No qualifications are placed on the data.

8. Laboratory Control Sample (LCS):

The recoveries for the LCS were within the control limits provided. No qualifications are placed on the data.

9. Duplicate Sample Analysis:

A. Laboratory Duplicate Analysis:

No sample from this analytical package underwent matrix spike/matrix spike duplicate (MS/MSD) analysis. No qualifications are placed on the data.

B. Field Duplicate Analysis:

No field duplicate samples were submitted with this analytical package. No qualifications are placed on the data.

10. Spiked Sample Analysis:

No sample from this analytical package underwent MS/MSD analysis. No qualifications are placed on the data.

11. ICP Serial Dilution:

No sample from this analytical package underwent serial dilution. No qualifications are placed on the data.

12. Sample Quantitation and Reporting Limits:

Concentrations of all reported analytes were correctly calculated.

Reported concentrations less than the reporting limit (RL) qualified “J” by the laboratory are qualified “JQ” to indicate that the result is less than the RL but greater than the method detection limit (MDL).

13. Laboratory Contact

No laboratory contact was required.

14. Overall Assessment:

Reported concentrations less than the RL qualified “J” by the laboratory are qualified “JQ” to indicate that the result is less than the RL but greater than the MDL.

The analytical data is acceptable for use with the qualifications listed above.

DATA QUALITY ASSURANCE REVIEW

SITE NAME Wilcox Oil

WORK ORDER NUMBER 20406.012.001.1065.01 TDD NUMBER 0001/17-065

PROJECT NUMBER _____ SDG NUMBER 490-137586-1

Weston Solutions, Inc. (WESTON®) has completed a QA review for Work Order Number 20406.012.001.1065.01; SDG No. 490-137586-1; Wilcox Oil. Two samples were analyzed for Polynuclear Aromatic Hydrocarbons (PAHs) by TestAmerica Laboratories, Inc. Sample numbers are listed below.

SAMPLE NUMBERS

Top Soil	Backfill	

This data package was validated to determine if Quality Control (QC) specifications were achieved, following *USEPA National Functional Guidelines for Organic Superfund Methods Data Review* (January, 2017), *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (January, 2017), *USEPA Contract Laboratory Program National Functional Guidelines for High Resolution Superfund Methods Data Review* (April, 2016), *Quality Assurance/Quality Control Guidance for Removal Activities* (September, 2011), and/or the Regional Protocol for Holding Times, Blanks, and VOA Preservation (April 13, 1989). Specific data qualifications are listed in the following discussion.

REVIEWER Gloria J. Switalski DATE October 6, 2017

Data Qualifiers

Data Qualifier Definitions were supplied by the Office of Solid Waste and Emergency Response (September 1989) and are included in the Functional Guidelines. Data qualifiers may be combined (UJ, QJ) with the corresponding combination of meanings. Additional qualifiers may be added to provide additional, more specific information (JL, UB, QJK), modifying the meaning of the primary qualifier. Addition qualifiers utilized by WESTON are H, L, K, B, and Q.

U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation or detection limit, which has been adjusted for sample weight/sample volume, extraction volume, percent solids, sample dilution or other analysis specific parameters.

An additional qualifier, "B", may be appended to indicate that while the analyte was detected in the sample, the presence of the analyte may be attributable to blank contamination and the analyte is therefore considered undetected with the sample detection or quantitation limit for the analyte being elevated.

J - The analyte was analyzed for, but the associated numerical value may not be consistent with the amount actually present in the environmental sample or may not be consistent with the sample detection or quantitation limit. The value is an estimated quantity. The data should be seriously considered for decision-making and are usable for many purposes.

An additional qualifier will be appended to the "J" qualifier that indicates the bias in the reported results:

L Low bias

H High bias

K Unknown bias

Q The reported concentration is less than the sample quantitation limit for the specific analyte in the sample.

The L and H qualifier will only be employed when a single qualification is required. When more than one quality control parameter affects the analytical result and a conflict results in assigning a bias, the result will be flagged JK.

R - Quality Control indicates that data are unusable for all purposes. The analyte was analyzed for, but the presence or absence of the analyte has not been verified. Resampling and reanalysis are necessary for verification to confirm or deny the presence of an analyte.

N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."

PAH FRACTION EVALUATION

1. Analytical Method:

Samples were prepared and analyzed using the procedures specified in **SW-846 Method 8270D Selective Ion Monitoring (SIM).**

2. Holding Time:

The samples were received within the recommended ≤6°C NFG limit. All samples were extracted within the required holding time of less than 7 days for waters and less than 14 days for solids/wastes after collection. Analysis of the samples was conducted within 40 days of extraction. No qualifications are placed on the data.

3. Tuning/Performance:

DFTPP tuning of the mass spectrometer(s) is not required when performing SIM. No qualifications are placed on the data.

4. Initial Calibration:

All individual relative response factors (RRFs) and average RRFs for the initial calibration were greater than the compound dependent (see Table 34 of National Functional Guidelines) control limits. All percent relative standard deviations (%RSDs) were less than the compound dependent (see Table 34 of National Functional Guidelines) control limits or the correlation coefficient was > 0.990. No qualifications are placed on the data.

5. Continuing Calibration:

All individual RRFs for the initial calibration verification (ICV) and continuing calibration (CC) standards were greater than the compound dependent (see Table 34 of National Functional Guidelines) control limits. All percent differences (%Ds) were less than the compound dependent (see Table 34 of National Functional Guidelines) control limits. No qualifications are placed on the data.

6. Blanks:

A. Laboratory Blanks:

A method blank was prepared at the required frequency of every time samples were extracted for each matrix and concentration or every 20 samples whichever is greater. No target analytes were detected in the method blank at concentrations that warrant blank action. No qualifications are placed on the data.

B. Field Blanks:

No field or rinsate blank samples were submitted with this analytical package. No qualifications are placed on the data.

7. System Monitoring Compounds (SMC):

All recoveries of the system monitoring compounds (surrogates) were within the control limits provided. No qualifications are placed on the data.

8. Duplicates:

A. Laboratory Duplicate Analysis:

Sample Backfill underwent MS/MSD analysis for the solid matrix. The relative percent difference (RPD) values for the duplicate sample analysis are less than 20% for aqueous samples and less than 35% for solid samples for concentrations greater than five times the reporting limit (RL). For sample concentrations less than five times the RL, the QC criteria are within ± the RL for the aqueous matrix or ± two times the RL for the solid matrix. All QC criteria were met. No qualifications are applied to the data.

B. Field Duplicate Analysis:

No field duplicate samples were submitted with this analytical package. No qualifications are placed on the data.

9. Matrix Spike/Matrix Spike Duplicate (MS/MSD):

Sample Backfill underwent MS/MSD analysis for the solid matrix. Recoveries of all spiked analytes were within the control limits provided in both the matrix spike and matrix spike duplicate. No qualifications are applied to the data.

10. Internal Standards:

Areas of the six internal standards were within the control limits of a factor of 2 (-50% to +100%) and retention times were within 30 seconds from the associated 12 hour calibration standard. No qualifications are placed on the data.

11. Laboratory Control Sample (LCS):

The laboratory analyzed an LCS and recoveries were within the control limits provided. No qualifications are placed on the data.

12. Target Compound Identification:

All target compounds reported by the laboratory met identification criteria of relative retention times (RRT) within 0.06 RRT units of the 12 hour standard and that all ions present in the standard mass spectrum were present in the sample mass spectrum and the abundance of these ions agreed within $\pm$ 20% of the standard. No qualifications are placed on the data.

13. Target Compound Quantitation and Reporting Limits:

Concentrations of all reported compounds were correctly calculated.

Reported concentrations less than the reporting limit (RL) qualified “J” by the laboratory are qualified “JQ” to indicate that the result is less than the RL but greater than the method detection limit (MDL).

14. Laboratory Contact:

No laboratory contact was required.

15. Overall Assessment

Reported concentrations less than the RL qualified “J” by the laboratory are qualified “JQ” to indicate that the result is less than the RL but greater than the MDL.

The analytical data is acceptable for use with the qualifications listed above.

DATA QUALITY ASSURANCE REVIEW

SITE NAME Wilcox Oil

WORK ORDER NUMBER 20406.012.001.1065.01 TDD NUMBER 0001/17-065

PROJECT NUMBER _____ SDG NUMBER 490-137671-1

Weston Solutions, Inc. (WESTON®) has completed a QA review for Work Order Number 20406.012.001.1065.01; SDG No. 490-137671-1; Wilcox Oil. One sample was analyzed for Polynuclear Aromatic Hydrocarbons (PAHs) by TestAmerica Laboratories, Inc. Sample numbers are listed below.

SAMPLE NUMBERS

WOR006-48-170928-56		

This data package was validated to determine if Quality Control (QC) specifications were achieved, following *USEPA National Functional Guidelines for Organic Superfund Methods Data Review* (January, 2017), *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (January, 2017), *USEPA Contract Laboratory Program National Functional Guidelines for High Resolution Superfund Methods Data Review* (April, 2016), *Quality Assurance/Quality Control Guidance for Removal Activities* (September, 2011), and/or the Regional Protocol for Holding Times, Blanks, and VOA Preservation (April 13, 1989). Specific data qualifications are listed in the following discussion.

REVIEWER Gloria J. Switalski DATE October 6, 2017

Data Qualifiers

Data Qualifier Definitions were supplied by the Office of Solid Waste and Emergency Response (September 1989) and are included in the Functional Guidelines. Data qualifiers may be combined (UJ, QJ) with the corresponding combination of meanings. Additional qualifiers may be added to provide additional, more specific information (JL, UB, QJK), modifying the meaning of the primary qualifier. Addition qualifiers utilized by WESTON are H, L, K, B, and Q.

U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation or detection limit, which has been adjusted for sample weight/sample volume, extraction volume, percent solids, sample dilution or other analysis specific parameters.

An additional qualifier, "B", may be appended to indicate that while the analyte was detected in the sample, the presence of the analyte may be attributable to blank contamination and the analyte is therefore considered undetected with the sample detection or quantitation limit for the analyte being elevated.

J - The analyte was analyzed for, but the associated numerical value may not be consistent with the amount actually present in the environmental sample or may not be consistent with the sample detection or quantitation limit. The value is an estimated quantity. The data should be seriously considered for decision-making and are usable for many purposes.

An additional qualifier will be appended to the "J" qualifier that indicates the bias in the reported results:

L Low bias

H High bias

K Unknown bias

Q The reported concentration is less than the sample quantitation limit for the specific analyte in the sample.

The L and H qualifier will only be employed when a single qualification is required. When more than one quality control parameter affects the analytical result and a conflict results in assigning a bias, the result will be flagged JK.

R - Quality Control indicates that data are unusable for all purposes. The analyte was analyzed for, but the presence or absence of the analyte has not been verified. Resampling and reanalysis are necessary for verification to confirm or deny the presence of an analyte.

N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."

PAH FRACTION EVALUATION

1. Analytical Method:

Samples were prepared and analyzed using the procedures specified in **SW-846 Method 8270D Selective Ion Monitoring (SIM).**

2. Holding Time:

The samples were received within the recommended ≤6°C NFG limit. All samples were extracted within the required holding time of less than 7 days for waters and less than 14 days for solids/wastes after collection. Analysis of the samples was conducted within 40 days of extraction. No qualifications are placed on the data.

3. Tuning/Performance:

DFTPP tuning of the mass spectrometer(s) is not required when performing SIM. No qualifications are placed on the data.

4. Initial Calibration:

All individual relative response factors (RRFs) and average RRFs for the initial calibration were greater than the compound dependent (see Table 34 of National Functional Guidelines) control limits. All percent relative standard deviations (%RSDs) were less than the compound dependent (see Table 34 of National Functional Guidelines) control limits or the correlation coefficient was > 0.990. No qualifications are placed on the data.

5. Continuing Calibration:

All individual RRFs for the initial calibration verification (ICV) and continuing calibration (CC) standards were greater than the compound dependent (see Table 34 of National Functional Guidelines) control limits. All percent differences (%Ds) were less than the compound dependent (see Table 34 of National Functional Guidelines) control limits. No qualifications are placed on the data.

6. Blanks:

A. Laboratory Blanks:

A method blank was prepared at the required frequency of every time samples were extracted for each matrix and concentration or every 20 samples whichever is greater. No target analytes were detected in the method blank at concentrations that warrant blank action. No qualifications are placed on the data.

B. Field Blanks:

No field or rinsate blank samples were submitted with this analytical package. No qualifications are placed on the data.

7. System Monitoring Compounds (SMC):

All recoveries of the system monitoring compounds (surrogates) were within the control limits with the following exceptions:

SAMPLE ID	SURROGATE	%R	QC LIMITS	QUALIFIER FLAG
WOR006-48-170928-56	2-Fluorobiphenyl Nitrobenzene-d5	121 129	29-120% 27-120%	JH*, detected compounds
WOR006-48-170928-56MS	2-Fluorobiphenyl Terphenyl-d14	145 122	29-120% 27-120%	None, QC sample

*2-Methylnaphthalene and 1-methylnaphthalene were ultimately qualified JK due to extremely low (<10%) or no (0%) MS/MSD recoveries as noted below.

8. Duplicates:

A. Laboratory Duplicate Analysis:

Sample WOR006-48-170928-56 underwent MS/MSD analysis for the solid matrix. The relative percent difference (RPD) values for the duplicate sample analysis are less than 20% for aqueous samples and less than 35% for solid samples for concentrations greater than five times the reporting limit (RL). For sample concentrations less than five times the RL, the QC criteria are within ± the RL for the aqueous matrix or ± two times the RL for the solid matrix. All QC criteria were met. No qualifications are applied to the data.

B. Field Duplicate Analysis:

No field duplicate samples were submitted with this analytical package. No qualifications are placed on the data.

9. Matrix Spike/Matrix Spike Duplicate (MS/MSD):

Sample WOR006-48-170928-56 underwent MS/MSD analysis for the solid matrix. Recoveries of the following spiked analytes were outside of the control limits provided:

SAMPLE ID	ANALYTE	%R/%R	CONTROL LIMITS	QUALIFIER FLAG
WOR006-48-170928-56	2-Methylnaphthalene 1-Methylnaphthalene	-26/-46 0.5/8	13-120% 10-120%	JL* JL*

*Ultimately qualified JK due to high surrogate recoveries as noted above.

10. Internal Standards:

Areas of the six internal standards were within the control limits of a factor of 2 (-50% to +100%) and retention times were within 30 seconds from the associated 12 hour calibration standard. No qualifications are placed on the data.

11. Laboratory Control Sample (LCS):

The laboratory analyzed an LCS and recoveries were within the control limits provided. No qualifications are placed on the data.

12. Target Compound Identification:

All target compounds reported by the laboratory met identification criteria of relative retention times (RRT) within 0.06 RRT units of the 12 hour standard and that all ions present in the standard mass spectrum were

present in the sample mass spectrum and the abundance of these ions agreed within ± 20% of the standard. No qualifications are placed on the data.

13. Target Compound Quantitation and Reporting Limits:

Concentrations of all reported compounds were correctly calculated.

Reported concentrations less than the reporting limit (RL) qualified "J" by the laboratory are qualified "JQ" to indicate that the result is less than the RL but greater than the method detection limit (MDL).

The only sample was analyzed at a 5-fold dilution due to the high concentration of target analytes and/or due to the sample matrix. RL in this sample are elevated as a result of the dilution performed.

14. Laboratory Contact:

The laboratory was contacted on October 5, 2017 regarding an incorrect field ID. An acceptable response was received on October 5, 2017.

15. Overall Assessment

Detected compound results in the only sample were estimated due to high surrogate recoveries.

Detected 2-methylnaphthalene and 1-methylnaphthalene results in the only sample were estimated due to no or extremely low (<10%) MS/MSD recoveries.

Reported concentrations less than the RL qualified "J" by the laboratory are qualified "JQ" to indicate that the result is less than the RL but greater than the MDL.

The analytical data is acceptable for use with the qualifications listed above.

DATA QUALITY ASSURANCE REVIEW

SITE NAME Wilcox Oil

WORK ORDER NUMBER 20406.012.001.1065.01 TDD NUMBER 0001/17-065

PROJECT NUMBER SDG NUMBER 490-137762-1

Weston Solutions, Inc. (WESTON®) has completed a QA review for Work Order Number 20406.012.001.1065.01; SDG No. 490-137762-1; Wilcox Oil. Two samples were analyzed for Polynuclear Aromatic Hydrocarbons (PAHs) by TestAmerica Laboratories, Inc. Sample numbers are listed below.

SAMPLE NUMBERS

WOR006-010-48-170929-56	WOR006-010-48-170929-57	

This data package was validated to determine if Quality Control (QC) specifications were achieved, following *USEPA National Functional Guidelines for Organic Superfund Methods Data Review* (January, 2017), *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (January, 2017), *USEPA Contract Laboratory Program National Functional Guidelines for High Resolution Superfund Methods Data Review* (April, 2016), *Quality Assurance/Quality Control Guidance for Removal Activities* (September, 2011), and/or the Regional Protocol for Holding Times, Blanks, and VOA Preservation (April 13, 1989). Specific data qualifications are listed in the following discussion.

REVIEWER Gloria J. Switalski DATE October 10, 2017

Data Qualifiers

Data Qualifier Definitions were supplied by the Office of Solid Waste and Emergency Response (September 1989) and are included in the Functional Guidelines. Data qualifiers may be combined (UJ, QJ) with the corresponding combination of meanings. Additional qualifiers may be added to provide additional, more specific information (JL, UB, QJK), modifying the meaning of the primary qualifier. Addition qualifiers utilized by WESTON are H, L, K, B, and Q.

U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation or detection limit, which has been adjusted for sample weight/sample volume, extraction volume, percent solids, sample dilution or other analysis specific parameters.

An additional qualifier, "B", may be appended to indicate that while the analyte was detected in the sample, the presence of the analyte may be attributable to blank contamination and the analyte is therefore considered undetected with the sample detection or quantitation limit for the analyte being elevated.

J - The analyte was analyzed for, but the associated numerical value may not be consistent with the amount actually present in the environmental sample or may not be consistent with the sample detection or quantitation limit. The value is an estimated quantity. The data should be seriously considered for decision-making and are usable for many purposes.

An additional qualifier will be appended to the "J" qualifier that indicates the bias in the reported results:

L Low bias

H High bias

K Unknown bias

Q The reported concentration is less than the sample quantitation limit for the specific analyte in the sample.

The L and H qualifier will only be employed when a single qualification is required. When more than one quality control parameter affects the analytical result and a conflict results in assigning a bias, the result will be flagged JK.

R - Quality Control indicates that data are unusable for all purposes. The analyte was analyzed for, but the presence or absence of the analyte has not been verified. Resampling and reanalysis are necessary for verification to confirm or deny the presence of an analyte.

N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."

PAH FRACTION EVALUATION

1. Analytical Method:

Samples were prepared and analyzed using the procedures specified in **SW-846 Method 8270D Selective Ion Monitoring (SIM).**

2. Holding Time:

The samples were received within the recommended ≤6°C NFG limit. All samples were extracted within the required holding time of less than 7 days for waters and less than 14 days for solids/wastes after collection. Analysis of the samples was conducted within 40 days of extraction. No qualifications are placed on the data.

3. Tuning/Performance:

DFTPP tuning of the mass spectrometer(s) is not required when performing SIM. No qualifications are placed on the data.

4. Initial Calibration:

All individual relative response factors (RRFs) and average RRFs for the initial calibration were greater than the compound dependent (see Table 34 of National Functional Guidelines) control limits. All percent relative standard deviations (%RSDs) were less than the compound dependent (see Table 34 of National Functional Guidelines) control limits or the correlation coefficient was > 0.990. No qualifications are placed on the data.

5. Continuing Calibration:

All individual RRFs for the initial calibration verification (ICV) and continuing calibration (CC) standards were greater than the compound dependent (see Table 34 of National Functional Guidelines) control limits. All percent differences (%Ds) were less than the compound dependent (see Table 34 of National Functional Guidelines) control limits. No qualifications are placed on the data.

6. Blanks:

A. Laboratory Blanks:

A method blank was prepared at the required frequency of every time samples were extracted for each matrix and concentration or every 20 samples whichever is greater. No target analytes were detected in the method blank at concentrations that warrant blank action. No qualifications are placed on the data.

B. Field Blanks:

No field or rinsate blank samples were submitted with this analytical package. No qualifications are placed on the data.

7. System Monitoring Compounds (SMC):

All recoveries of the system monitoring compounds (surrogates) were within the control limits with the following exceptions:

SAMPLE ID	SURROGATE	%R	QC LIMITS	QUALIFIER FLAG
WOR006-010-48-170929-56	Nitrobenzene-d5	260	27-120%	None, only 1 out
WOR006-010-48-170929-56MS	Nitrobenzene-d5	215	27-120%	None, only 1 out & QC sample
WOR006-010-48-170929-56MSD	Nitrobenzene-d5	357	27-120%	None, only 1 out & QC sample
WOR006-010-48-170929-57	Nitrobenzene-d5	607	27-120%	None, only 1 out

8. Duplicates:

A. Laboratory Duplicate Analysis:

Sample WOR006-010-48-170929-56 underwent MS/MSD analysis for the solid matrix. The relative percent difference (RPD) values for the duplicate sample analysis are less than 20% for aqueous samples and less than 35% for solid samples for concentrations greater than five times the reporting limit (RL). For sample concentrations less than five times the RL, the QC criteria are within ± the RL for the aqueous matrix or ± two times the RL for the solid matrix. QC criteria were met for the following compound:

SAMPLE ID/MATRIX	ANALYTE	RPD	AFFECTED SAMPLE	QUALIFIER FLAG
WOR006-010-48-170929-56/Solid	Naphthalene	50	WOR006-010-48-170929-56	None, sample ND
	2-Methylnaphthalene	49		JK
	1-Methylnaphthalene	45		JK

B. Field Duplicate Analysis:

No field duplicate samples were submitted with this analytical package. No qualifications are placed on the data.

9. Matrix Spike/Matrix Spike Duplicate (MS/MSD):

Sample WOR006-010-48-170929-56 underwent MS/MSD analysis for the solid matrix. Recoveries of the following spiked analytes were outside of the control limits provided:

SAMPLE ID	ANALYTE	%R/%R	CONTROL LIMITS	QUALIFIER FLAG
WOR006-010-48-170929-56	Acenaphthene	OK/149	19-120%	JH
	Fluorene	180/221	20-120%	None, sample ND
	Indeno(1,2,3-cd)pyrene	124/145	22-121%	None, sample ND
	Naphthalene	OK/203	10-120%	None, sample ND
	Phenanthrene	OK/133	21-122%	JH

10. Internal Standards:

Areas of the six internal standards were within the control limits of a factor of 2 (-50% to +100%) and retention times were within 30 seconds from the associated 12 hour calibration standard with the following exceptions:

SAMPLE ID	INTERNAL STANDARD	% AREA OF 12 HR STD	QUALIFIER FLAG *
WOR006-010-48-170929-56MSD	Dichlorobenzene-d4	48.6%	None, QC sample
	Perylene-d12	48.5%	

SAMPLE ID	INTERNAL STANDARD	% AREA OF 12 HR STD	QUALIFIER FLAG *
WOR006-010-48-170929-57	Perylene-d12	46.5%	JH/UJ

*Impacted compounds include benzo(a)pyrene; benzo(b)fluoranthene; benzo(g,h,i)perylene; benzo(k)fluoranthene; dibenz(a,h)anthracene; and indeno(1,2,3-cd)pyrene.

11. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD):

The laboratory analyzed an LCS/LCSD and recoveries and RPD were within the control limits provided. No qualifications are placed on the data.

12. Target Compound Identification:

All target compounds reported by the laboratory met identification criteria of relative retention times (RRT) within 0.06 RRT units of the 12 hour standard and that all ions present in the standard mass spectrum were present in the sample mass spectrum and the abundance of these ions agreed within $\pm$ 20% of the standard. No qualifications are placed on the data.

13. Target Compound Quantitation and Reporting Limits:

Concentrations of all reported compounds were correctly calculated.

Reported concentrations less than the reporting limit (RL) qualified "J" by the laboratory are qualified "JQ" to indicate that the result is less than the RL but greater than the method detection limit (MDL).

Both samples were analyzed at a 5-fold dilution due to the high concentration of target analytes and/or due to the sample matrix. RL in these samples are elevated as a result of the dilutions performed.

14. Laboratory Contact:

No laboratory contact was required.

15. Overall Assessment

2-Methylnaphthalene and 1-methylnaphthalene results in one sample were estimated due to high MSD RPDs.

Acenaphthene and phenanthrene results in one sample were estimated due to high MS/MSD recoveries.

Benzo(a)pyrene; benzo(b)fluoranthene; benzo(g,h,i)perylene; benzo(k)fluoranthene; dibenz(a,h)anthracene; and indeno(1,2,3-cd)pyrene results in one sample were estimated due to low internal standard area recovery.

Reported concentrations less than the RL qualified "J" by the laboratory are qualified "JQ" to indicate that the result is less than the RL but greater than the MDL.

The analytical data is acceptable for use with the qualifications listed above.

DATA QUALITY ASSURANCE REVIEW

SITE NAME Wilcox Oil

WORK ORDER NUMBER 20406.012.001.1065.01 TDD NUMBER 0001/17-065

PROJECT NUMBER _____ SDG NUMBER 490-137889-1

Weston Solutions, Inc. (WESTON®) has completed a QA review for Work Order Number 20406.012.001.1065.01; SDG No. 490-137889-1; Wilcox Oil. Four samples were analyzed for Target Analyte List (TAL) Metals and mercury by TestAmerica Laboratories, Inc. Sample numbers are listed below.

SAMPLE NUMBERS

West-01	West-02	North
South		

This data package was validated to determine if Quality Control (QC) specifications were achieved, following *USEPA National Functional Guidelines for Organic Superfund Methods Data Review* (January, 2017), *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (January, 2017), *USEPA Contract Laboratory Program National Functional Guidelines for High Resolution Superfund Methods Data Review* (April, 2016), *Quality Assurance/Quality Control Guidance for Removal Activities* (September, 2011), and/or the Regional Protocol for Holding Times, Blanks, and VOA Preservation (April 13, 1989). Specific data qualifications are listed in the following discussion.

REVIEWER Gloria J. Switalski DATE October 23, 2017

Data Qualifiers

Data Qualifier Definitions were supplied by the Office of Solid Waste and Emergency Response (September 1989) and are included in the Functional Guidelines. Data qualifiers may be combined (UJ, QJ) with the corresponding combination of meanings. Additional qualifiers may be added to provide additional, more specific information (JL, UB, QJK), modifying the meaning of the primary qualifier. Addition qualifiers utilized by WESTON are H, L, K, B, and Q.

U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation or detection limit, which has been adjusted for sample weight/sample volume, extraction volume, percent solids, sample dilution or other analysis specific parameters.

An additional qualifier, "B", may be appended to indicate that while the analyte was detected in the sample, the presence of the analyte may be attributable to blank contamination and the analyte is therefore considered undetected with the sample detection or quantitation limit for the analyte being elevated.

J - The analyte was analyzed for, but the associated numerical value may not be consistent with the amount actually present in the environmental sample or may not be consistent with the sample detection or quantitation limit. The value is an estimated quantity. The data should be seriously considered for decision-making and are usable for many purposes.

An additional qualifier will be appended to the "J" qualifier that indicates the bias in the reported results:

L Low bias

H High bias

K Unknown bias

Q The reported concentration is less than the sample quantitation limit for the specific analyte in the sample.

The L and H qualifier will only be employed when a single qualification is required. When more than one quality control parameter affects the analytical result and a conflict results in assigning a bias, the result will be flagged JK.

R - Quality Control indicates that data are unusable for all purposes. The analyte was analyzed for, but the presence or absence of the analyte has not been verified. Resampling and reanalysis are necessary for verification to confirm or deny the presence of an analyte.

N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."

METALS DATA EVALUATION

1. Analytical Method:

Samples were prepared and analyzed for ICP metals using the procedures specified in **SW-846 Method 6020A.** Samples were prepared and analyzed for mercury using the procedures specified in **SW-846 Methods 7471B.**

2. Holding Times:

The samples were received above the recommended ≤6°C NFG limit. Professional judgment was used to not qualify the sample results. All samples met established holding time criteria of 180 days for ICP metals and 28 days for mercury. No qualifications are placed on the data.

3. Initial Calibration:

ICP initial calibration included a blank and three standards and initial calibration verification results fell within the control limits of 90% to 110% of the true values and mercury initial calibration included a blank and six standards and initial calibration verification results fell within the control limits of 85% to 115% values. No qualifications are placed on the data.

4. Continuing Calibration:

All ICP results fell within the control limits of 90% to 110% of the true values and all mercury results fell within the control limits of 85% to 115% of the true values. No qualifications are placed on the data.

5. CRDL Standard:

All results for the CRDL standard were within the control limits of 70% to 130% of the true values or the sample results were greater than the CRDL action level. No qualifications are placed on the data.

6. Blanks:

A. Laboratory Blanks:

A method blank was prepared at the required frequency of every time samples were prepared/digested for each matrix or every 20 samples whichever is greater. Target analytes were detected in the method and calibration blanks at concentrations that warrant blank action. Sample concentrations less than five times the highest analyte concentration reported in associated blanks are flagged UB (not detected, detection limit raised due to possible blank contamination). Details are noted below:

INSTRUMENT ID DATE/TIME	ANALYTE/BLANK ID	CONCENTRATION	AFFECTED SAMPLES
ICPMS3 10/6/17 @11:05	Iron/MB 490-465078/1-A	2.856 mg/kg	All Solids, remove laboratory “B” flag
ICPMS2 10/4/2017 @12:40	Antimony/CCB 490-465475/20	0.0008651 mg/L	UB, All Solids

MB=Method Blank; CCB=Continuing Calibration Blank

B. Field Blanks:

No field or rinsate blank samples were submitted with this analytical package. No qualifications are placed on the data.

7. ICP Interference Check:

All results for the interference check sample were within the control limits of 80% to 120% of the true values. No qualifications are placed on the data.

8. Laboratory Control Sample (LCS):

The recoveries for the LCS were within the control limits provided. No qualifications are placed on the data.

9. Duplicate Sample Analysis:

A. Laboratory Duplicate Analysis:

No sample from this analytical package underwent matrix spike/matrix spike duplicate (MS/MSD) analysis. No qualifications are placed on the data.

B. Field Duplicate Analysis:

No field duplicate samples were submitted with this analytical package. No qualifications are placed on the data.

10. Spiked Sample Analysis:

No sample from this analytical package underwent MS/MSD analysis. No qualifications are placed on the data.

11. ICP Serial Dilution:

No sample from this analytical package underwent serial dilution. No qualifications are placed on the data.

12. Sample Quantitation and Reporting Limits:

Concentrations of all reported analytes were correctly calculated.

Reported concentrations less than the reporting limit (RL) qualified “J” by the laboratory are qualified “JQ” to indicate that the result is less than the RL but greater than the method detection limit (MDL).

Manganese, selenium, and zinc in one sample were analyzed at a 5-fold dilution due to the high concentration of target analytes and/or due to the sample matrix. RL in this sample are as a result of the dilution performed.

13. Laboratory Contact

The laboratory was contacted on October 12, 2017 regarding the manganese percent recovery on a Form 2B-IN. An acceptable response was received on October 20, 2017.

14. Overall Assessment:

The antimony result in all solid samples was qualified due to method blank action.

Reported concentrations less than the RL qualified “J” by the laboratory are qualified “JQ” to indicate that the result is less than the RL but greater than the MDL.

The analytical data is acceptable for use with the qualifications listed above.

DATA QUALITY ASSURANCE REVIEW

SITE NAME Wilcox Oil

WORK ORDER NUMBER 20406.012.001.1065.01 TDD NUMBER 0001/17-065

PROJECT NUMBER SDG NUMBER 490-137889-1

Weston Solutions, Inc. (WESTON®) has completed a QA review for Work Order Number 20406.012.001.1065.01; SDG No. 490-137889-1; Wilcox Oil. Six samples were analyzed for Polynuclear Aromatic Hydrocarbons (PAHs) by TestAmerica Laboratories, Inc. Sample numbers are listed below.

SAMPLE NUMBERS

WOR006-012-36-171002-56	WOR006-011-36-171002-56	West-01
West-02	North	South

This data package was validated to determine if Quality Control (QC) specifications were achieved, following *USEPA National Functional Guidelines for Organic Superfund Methods Data Review* (January, 2017), *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (January, 2017), *USEPA Contract Laboratory Program National Functional Guidelines for High Resolution Superfund Methods Data Review* (April, 2016), *Quality Assurance/Quality Control Guidance for Removal Activities* (September, 2011), and/or the Regional Protocol for Holding Times, Blanks, and VOA Preservation (April 13, 1989). Specific data qualifications are listed in the following discussion.

REVIEWER Gloria J. Switalski DATE October 12, 2017

Data Qualifiers

Data Qualifier Definitions were supplied by the Office of Solid Waste and Emergency Response (September 1989) and are included in the Functional Guidelines. Data qualifiers may be combined (UJ, QJ) with the corresponding combination of meanings. Additional qualifiers may be added to provide additional, more specific information (JL, UB, QJK), modifying the meaning of the primary qualifier. Addition qualifiers utilized by WESTON are H, L, K, B, and Q.

U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation or detection limit, which has been adjusted for sample weight/sample volume, extraction volume, percent solids, sample dilution or other analysis specific parameters.

An additional qualifier, "B", may be appended to indicate that while the analyte was detected in the sample, the presence of the analyte may be attributable to blank contamination and the analyte is therefore considered undetected with the sample detection or quantitation limit for the analyte being elevated.

J - The analyte was analyzed for, but the associated numerical value may not be consistent with the amount actually present in the environmental sample or may not be consistent with the sample detection or quantitation limit. The value is an estimated quantity. The data should be seriously considered for decision-making and are usable for many purposes.

An additional qualifier will be appended to the "J" qualifier that indicates the bias in the reported results:

L Low bias

H High bias

K Unknown bias

Q The reported concentration is less than the sample quantitation limit for the specific analyte in the sample.

The L and H qualifier will only be employed when a single qualification is required. When more than one quality control parameter affects the analytical result and a conflict results in assigning a bias, the result will be flagged JK.

R - Quality Control indicates that data are unusable for all purposes. The analyte was analyzed for, but the presence or absence of the analyte has not been verified. Resampling and reanalysis are necessary for verification to confirm or deny the presence of an analyte.

N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."

PAH FRACTION EVALUATION

1. Analytical Method:

Samples were prepared and analyzed using the procedures specified in **SW-846 Method 8270D Selective Ion Monitoring (SIM).**

2. Holding Time:

The samples were received within the recommended ≤6°C NFG limit. All samples were extracted within the required holding time of less than 7 days for waters and less than 14 days for solids/wastes after collection. Analysis of the samples was conducted within 40 days of extraction. No qualifications are placed on the data.

3. Tuning/Performance:

DFTPP tuning of the mass spectrometer(s) is not required when performing SIM. No qualifications are placed on the data.

4. Initial Calibration:

All individual relative response factors (RRFs) and average RRFs for the initial calibration were greater than the compound dependent (see Table 34 of National Functional Guidelines) control limits. All percent relative standard deviations (%RSDs) were less than the compound dependent (see Table 34 of National Functional Guidelines) control limits or the correlation coefficient was > 0.990. No qualifications are placed on the data.

5. Continuing Calibration:

All individual RRFs for the initial calibration verification (ICV) and continuing calibration (CC) standards were greater than the compound dependent (see Table 34 of National Functional Guidelines) control limits. All percent differences (%Ds) were less than the compound dependent (see Table 34 of National Functional Guidelines) control limits. No qualifications are placed on the data.

6. Blanks:

A. Laboratory Blanks:

A method blank was prepared at the required frequency of every time samples were extracted for each matrix and concentration or every 20 samples whichever is greater. No target analytes were detected in the method blank at concentrations that warrant blank action. No qualifications are placed on the data.

B. Field Blanks:

No field or rinsate blank samples were submitted with this analytical package. No qualifications are placed on the data.

7. System Monitoring Compounds (SMC):

All recoveries of the system monitoring compounds (surrogates) were within the control limits with the following exceptions:

SAMPLE ID	SURROGATE	%R	QC LIMITS	QUALIFIER FLAG
WOR006-012-36-171002-56	Nitrobenzene-d5	247	27-120%	None, only 1 out & 10X DL
WOR006-011-36-171002-56	Nitrobenzene-d5	255	27-120%	None, only 1 out & 10X DL
West-01	2-Fluorobiphenyl	19	29-120%	None, only 1 out & 10X DL
West-02	2-Fluorobiphenyl Nitrobenzene-d5	19 17	29-120% 27-120%	None, 10X DL
North	2-Fluorobiphenyl Nitrobenzene-d5 Terphenyl-d4	6 5 8	29-120% 27-120% 13-120%	None, 25X DL
South	2-Fluorobiphenyl Nitrobenzene-d5	14 13	29-120% 27-120%	None, 25X DL

DL=dilution

8. Duplicates:

A. Laboratory Duplicate Analysis:

No sample from this analytical package underwent matrix spike/matrix spike duplicate (MS/MSD) analysis. No qualifications are placed on the data.

B. Field Duplicate Analysis:

No field duplicate samples were submitted with this analytical package. No qualifications are placed on the data.

9. Matrix Spike/Matrix Spike Duplicate (MS/MSD):

No sample from this analytical package underwent MS/MSD analysis. No qualifications are placed on the data.

10. Internal Standards:

Areas of the six internal standards were within the control limits of a factor of 2 (-50% to +100%) and retention times were within 30 seconds from the associated 12 hour calibration standard with the following exceptions:

SAMPLE ID	INTERNAL STANDARD	% AREA OF 12 HR STD	QUALIFIER FLAG *
WOR006-012-36-171002-56 (10X)	Perylene-d12	43.4%	None, affected compounds reported from 25X
WOR006-011-36-171002-56 (10X)	1,4-Dichlorobenzene-d4 Perylene-d12	48.5% 42.1%	None, affected compounds reported from 25X
West-01	Perylene-d12	41.3%	JH
West-02	Perylene-d12	45.4%	JH/UJ

*Impacted compounds include benzo(a)pyrene; benzo(b)fluoranthene; benzo(g,h,i)perylene; benzo(k)fluoranthene; dibenz(a,h)anthracene; and indeno(1,2,3-cd)pyrene.

11. Laboratory Control Sample (LCS):

The laboratory analyzed an LCS and recoveries were within the control limits provided. No qualifications are placed on the data.

12. Target Compound Identification:

All target compounds reported by the laboratory met identification criteria of relative retention times (RRT) within 0.06 RRT units of the 12 hour standard and that all ions present in the standard mass spectrum were present in the sample mass spectrum and the abundance of these ions agreed within $\pm$ 20% of the standard. No qualifications are placed on the data.

13. Target Compound Quantitation and Reporting Limits:

Concentrations of all reported compounds were correctly calculated.

Reported concentrations less than the reporting limit (RL) qualified "J" by the laboratory are qualified "JQ" to indicate that the result is less than the RL but greater than the method detection limit (MDL).

All samples were analyzed at a 10 or 25-fold dilution due to the high concentration of target analytes and/or due to the sample matrix. RL in these samples are elevated as a result of the dilutions performed.

14. Laboratory Contact:

No laboratory contact was required.

15. Overall Assessment

Benzo(a)pyrene; benzo(b)fluoranthene; benzo(g,h,i)perylene; benzo(k)fluoranthene; dibenz(a,h)anthracene; and indeno(1,2,3-cd)pyrene results in two samples were estimated due to low internal standard area recoveries.

Reported concentrations less than the RL qualified "J" by the laboratory are qualified "JQ" to indicate that the result is less than the RL but greater than the MDL.

The analytical data is acceptable for use with the qualifications listed above.

DATA QUALITY ASSURANCE REVIEW

SITE NAME Wilcox Oil

WORK ORDER NUMBER 20406.012.001.1065.01 TDD NUMBER 0001/17-065

PROJECT NUMBER _____ SDG NUMBER 490-137889-1

Weston Solutions, Inc. (WESTON®) has completed a QA review for Work Order Number 20406.012.001.1065.01; SDG No. 490-137889-1; Wilcox Oil. Four samples were analyzed for Semivolatile Organic Compounds (SVOCs) by TestAmerica Laboratories, Inc. Sample numbers are listed below.

SAMPLE NUMBERS

West-01	West-02	North
South		

This data package was validated to determine if Quality Control (QC) specifications were achieved, following *USEPA National Functional Guidelines for Organic Superfund Methods Data Review* (January, 2017), *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (January, 2017), *USEPA Contract Laboratory Program National Functional Guidelines for High Resolution Superfund Methods Data Review* (April, 2016), *Quality Assurance/Quality Control Guidance for Removal Activities* (September, 2011), and/or the Regional Protocol for Holding Times, Blanks, and VOA Preservation (April 13, 1989). Specific data qualifications are listed in the following discussion.

REVIEWER Gloria J. Switalski DATE October 23, 2017

Data Qualifiers

Data Qualifier Definitions were supplied by the Office of Solid Waste and Emergency Response (September 1989) and are included in the Functional Guidelines. Data qualifiers may be combined (UJ, QJ) with the corresponding combination of meanings. Additional qualifiers may be added to provide additional, more specific information (JL, UB, QJK), modifying the meaning of the primary qualifier. Addition qualifiers utilized by WESTON are H, L, K, B, and Q.

U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation or detection limit, which has been adjusted for sample weight/sample volume, extraction volume, percent solids, sample dilution or other analysis specific parameters.

An additional qualifier, "B", may be appended to indicate that while the analyte was detected in the sample, the presence of the analyte may be attributable to blank contamination and the analyte is therefore considered undetected with the sample detection or quantitation limit for the analyte being elevated.

J - The analyte was analyzed for, but the associated numerical value may not be consistent with the amount actually present in the environmental sample or may not be consistent with the sample detection or quantitation limit. The value is an estimated quantity. The data should be seriously considered for decision-making and are usable for many purposes.

An additional qualifier will be appended to the "J" qualifier that indicates the bias in the reported results:

L Low bias

H High bias

K Unknown bias

Q The reported concentration is less than the sample quantitation limit for the specific analyte in the sample.

The L and H qualifier will only be employed when a single qualification is required. When more than one quality control parameter affects the analytical result and a conflict results in assigning a bias, the result will be flagged JK.

R - Quality Control indicates that data are unusable for all purposes. The analyte was analyzed for, but the presence or absence of the analyte has not been verified. Resampling and reanalysis are necessary for verification to confirm or deny the presence of an analyte.

N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."

SVOC FRACTION EVALUATION

1. Analytical Method:

Samples were prepared and analyzed for SVOCs using the procedures specified in **SW-846 Method 8270D.**

2. Holding Time:

The samples were received within the recommended ≤6°C NFG limit. All samples were extracted within the required holding time of less than 7 days for waters and less than 14 days for solids/wastes after collection. Analysis of the samples was conducted within 40 days of extraction. No qualifications are placed on the data.

3. Tuning/Performance:

DFTPP tuning of the mass spectrometer(s) was conducted at the required frequency and results were within the required criteria. No qualifications are placed on the data.

4. Initial Calibration:

All individual relative response factors (RRFs) and average RRFs for the initial calibration were greater than the compound dependent (see Table 34 of National Functional Guidelines) control limits. All percent relative standard deviations (%RSDs) were less than the compound dependent (see Table 34 of National Functional Guidelines) control limits or the correlation coefficient was > 0.990. No qualifications are placed on the data.

5. Continuing Calibration:

All individual RRFs for the initial calibration verification (ICV) and continuing calibration (CC) standards were greater than the compound dependent (see Table 34 of National Functional Guidelines) control limits. All percent differences (%Ds) were less than the compound dependent (see Table 34 of National Functional Guidelines) control limits with the following exceptions:

STANDARD TYPE	ANALYTE	%D	QC LIMIT	AFFECTED SAMPLES	QUALIFIER FLAG
ICV	Benzaldehyde	46.4	≤40	All	UJK
	Hexachlorocyclopentadiene	45.4	≤25		UJK
	Benzidine	51.0	≤30		UJK

6. Blanks:

A. Laboratory Blanks

A method blank was prepared at the required frequency of every time samples were extracted for each matrix and concentration or every 20 samples whichever is greater. Target compounds were not detected in the blanks analyzed. No qualifications are placed on the data.

B. Field Blanks:

No field blank samples were submitted with this analytical package. No qualifications are placed on the data.

7. System Monitoring Compounds (SMC):

All recoveries of the system monitoring compounds (surrogates) were within the control limits with the following exceptions:

SAMPLE ID	SURROGATE	%R	QC LIMITS	QUALIFIER FLAG
West-02	2-Fluorobiphenyl	10	29-120%	None, 25X DL
	Nitrobenzene-d5	12	27-120%	
	Phenol-d5	9	10-120%	
North	2-Fluorobiphenyl	3	29-120%	None, 25X DL
	2-Fluorophenol	9	10-120%	
	Nitrobenzene-d5	3	27-120%	
	Phenol-d5	4	10-120%	
	Terphenyl-d4	5	13-120%	
South	2,4,6-Tribromophenol	478	10-120%	None, 200X DL

DL=dilution

8. Matrix Spike/Matrix Spike Duplicate (MS/MSD):

No sample from this analytical package underwent MS/MSD analysis for the soil matrix. No qualifications are placed on the data.

9. Duplicates:

A. Laboratory Duplicate Analysis:

No sample from this analytical package underwent MS/MSD analysis for the soil matrix. No qualifications are placed on the data.

B. Field Duplicate Analysis:

No field duplicate samples were submitted with this analytical package. No qualifications are placed on the data.

10. Internal Standards:

Areas of the six internal standards were within the control limits of a factor of 2 (-50% to +100%) and retention times were within 30 seconds from the associated 12 hour calibration standard. No qualifications are placed on the data.

11. Laboratory Control Sample (LCS):

The laboratory analyzed LCS and recoveries were within the control limits provided. No qualifications are placed on the data.

12. Target Compound Identification:

All target compounds reported by the laboratory met identification criteria of relative retention times (RRT) within 0.06 RRT units of the 12 hour standard and that all ions present in the standard mass spectrum were present in the sample mass spectrum and the abundance of these ions agreed within $\pm$ 20% of the standard. No qualifications are placed on the data.

13. Target Compound Quantitation and Reporting Limits:

All samples were ND.

All samples were analyzed at a 25 or 200-fold dilution due to the high concentration of target analytes and/or due to the sample matrix. Reporting limits in these samples are elevated as a result of the dilutions performed.

14. Laboratory Contact:

The laboratory was contacted on October 12, 2017 regarding the lack of initial calibration data and why samples weren't analyzed at lesser dilutions. An acceptable response was received on October 20, 2017.

15. Overall Assessment

Benzaldehyde, hexachlorocyclopentadiene, and benzidine results in all samples were estimated due to high initial calibration verification %D.

The analytical data is acceptable for use with the qualifications listed above.